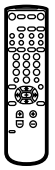
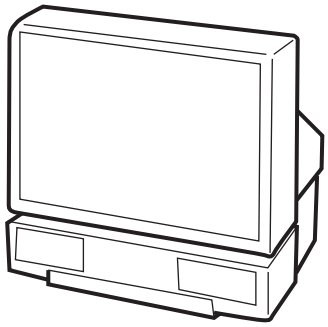
SERVICE MANUAL RA-2A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KP-41T65	RM-Y136A	US	SCC-N65D-A
KP-41T65	RM-Y136A	Canadian	SCC-N66B-A
KP-46C65	RM-Y136A	US	SCC-N65E-A
KP-46C65	RM-Y136A	Canadian	SCC-N66D-A
KP-48S65	RM-Y136A	US	SCC-N65B-A
KP-48S65	RM-Y136A	Canadian	SCC-N66A-A

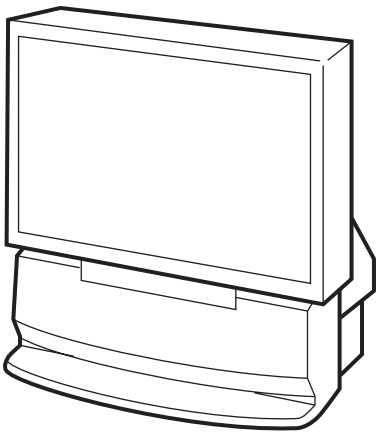
MODEL	COMMANDER	DEST.	CHASSIS NO.
KP-53S65	RM-Y136A	US	SCC-N65A-A
KP-53S65	RM-Y136A	US	SCC-N65A-B
KP-53S65	RM-Y136A	Canadian	SCC-N66C-A
KP-61S65	RM-Y136A	US	SCC-N65C-A
KP-61S65	RM-Y136A	Canadian	SCC-N66E-A



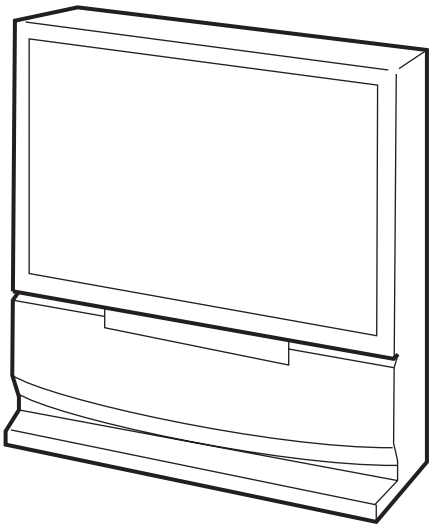
RM-Y136A



KP-41T65



KP-46C65/48S65/53S65



KP-61S65

MICROFILM

* Please file according to model size. .....

41 46 48 53 61

PROJECTION TV

SONY

SPECIFICATIONS

Projection system	3 picture tubes, 3 lenses, horizontal in-line system
Picture tube	7 inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system
Projection lenses	High performance, large-diameter hybrid lens F1.1

Screen size (measured diagonally)

KP-41T65	41 inches
KP-46C65	46 inches
KP-48S65	48 inches
KP-53S65	53 inches
KP-61S65	61 inches

Television system	American TV standards
Channel coverage	VHF: 2 – 13 / UHF: 14 – 69 / CATV: 1 – 125
Antenna	75 ohm external antenna terminal for VHF/UHF
Inputs/output	VIDEO IN 1 VIDEO IN 2 (VIDEO 2 INPUT) S VIDEO (4-pin mini DIN): Y: 1 Vp-p, 75-ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal) 75 ohms VIDEO (phono jack): 1 Vp-p, 75-ohms unbalanced, sync negative AUDIO (phono jacks): 500 mVrms (100% modulation) Impedance : 47 kilohms VIDEO IN 3 VIDEO (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative AUDIO (phono jacks): 500 mVrms (100% modulation) Impedance: 47 kilohms MONITOR OUT VIDEO (phono jack): 1 Vp-p, 75-ohms unbalanced, sync negative AUDIO (phono jacks): 500 mVrms (100% modulation), Impedance: 10 kilohms AUDIO OUT (phono jacks): 900 mVrms (100% modulation) Impedance: 5 kilohms
Speaker	Full range speaker 100 mm (3.9 inches) diameter
Speaker output	15 W x 2
Power requirement	120 V, 60 Hz
Power consumption	165 W Standby mode: 3 W

	Dimensions (W/H/D)	Mass
KP-41T65	951 x 1,022 x 602 mm (37 1/2 x 40 1/4 x 23 3/4 inches)	55 kg (121 lbs 4 oz)
KP-46C65	1,066 x 1,306 x 563 mm (42 x 51 1/2 x 22 1/4 inches)	65 kg (143 lbs 5 oz)
KP-48S65	1,106 x 1,337 x 571 mm (43 5/8 x 52 5/8 x 22 1/2 inches)	67 kg (147 lbs 11 oz)
KP-53S65	1,218 x 1,413 x 614 mm (48 x 55 5/8 x 24 1/4 inches)	69 kg (152 lbs 1 oz)
KP-61S65	1,338 x 1,506 x 642 mm (52 3/4 x 59 3/8 x 25 3/8 inches)	122 kg (268 lbs 15 oz)

Supplied accessories	Remote control RM-Y136A (1) Size AA (R6) battery (2)
Optional accessories	U/V mixer EAC-66 Connecting cables RK-74A, VMC-810S/820S, YC-15V/30V, VMC-720M Stand SU-41T2 (For KP-41T65) High-contrast protective screen SCN-46X1 (For KP-46C65) SCN-48X2 (For KP-48S65) SCN-53X2 (For KP-53S65) SCN-61X2 (For KP-61S65)

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perfom the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recom mend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate;be suspicious of your HV meter if sets always have low HV.
9. Check the antenna temminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers) . Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to usc these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. NearIy all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground;the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-l00 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

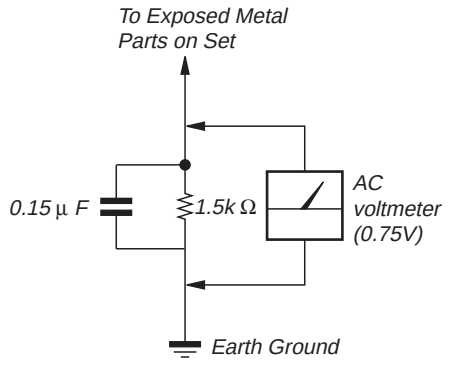


Fig. A. Using an AC voltmeter to check AC leakage.

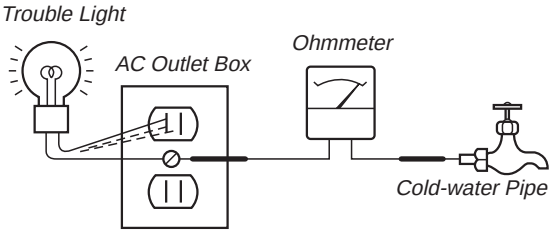


Fig. B. Checking for earth ground.

TABLE OF CONTENTS

Section Title Page

1. GENERAL

Step 1 : Installing the projection TV 5
Step 2 : Hook up 6
Step 3 : Setting up the remote control 9
Step 4 : Setting up the projection TV automatically (AUTO SET UP) 10
Changing the menu language 12
Watching the TV 12
Watching tow programs at one time-PIP 13
Freezing the picture (FREEZE) 14
Adjusting the picture (VIDEO) 14
Adjusting the color temperature (TRINITONE) 15
Selecting the video mode (VIDEO) 15
Adjusting the sound (AUDIO) 15
Using audio effect (SURROUND) 16
Selecting stereo or bilingual programs (MTS) 16
Setting the speaker switch (SPEAKER) 16
Setting audio out (AUDIO OUT) 17
Setting daylight saving time (DAYLIGHT SAVING) 17
Setting the clock (CURRENT TIME SET) 17
Setting the timer to turn the projection TV on and off (ON/OFF TIMER) 18
Customizing the channel names (CHANNEL CAPTION) 18
Blocking out a channel (CHANNEL BLOCK) 19
Setting your favorite channels (FAVORITE CHANNEL) 19
Setting video labels (VIDEO LABEL) 19
Setting Caption Vision (CAPTION VISION) 20
Operating video equipment 20
Operating a cable box or DBS receiver 21
Troubleshooting 22
Index to parts and controls 22

2. DISASSEMBLY

2-1. Rear Board Removal 24
2-2. Chassis Assy Removal 24
2-3. Service Position 24
2-4-1. HA Board Removal (KP-41T65) 25
2-4-2. HA Board Removal (KP-46C65) 25
2-4-3. HA Board Removal (KP-48S65/53S65/61S65) 25
2-5-1. Beznet Assy Removal (KP-41T65) 26
2-5-2. Beznet Assy Removal (KP-46C65/48S65/53S65) 26
2-5-3. Screen Frame Assy Removal (KP-61S65) 26
2-6-1. Mirror Cover Assy Removal (KP-41T65) 27
2-6-2. Mirror Cover Assy Removal (KP-46C65/48S65/53S65/61S65) 27
2-6-3. Reflection Mirror Removal (KP-61S65) 27
2-7. High-Voltage Cable Installation and Removal 28
2-8-1. Picture Tube Removal (KP-41T65) 28
2-8-2. Picture Tube Removal (KP-46C65/48S65/53S65/61S65) 28
2-9-1. Service stay Assy How to use and Carry Back Service stay Assy 29
2-9-2. Picture Tube Bracket Assy Removal (KP-41T65) 29
2-9-3. Picture Tube Bracket Assy Removal (KP-46C65/48S65/53S65/61S65) 30
2-9-4. Setting of Service stay Assy (KP-46C65/48S65/53S65) 31
2-9-5. Install a Chassis Assy 31

3. SET-UP ADJUSTMENTS 32

4. SAFETY RELATEDP ADJUSTMENTS 45

5. CIRCUIT ADJUSTMENTS 47

6. DIAGRAMS

6-1. Block Diagram (1) 49
Block Diagram (2) 52
Block Diagram (3) 54
6-2. Frame Schematic Diagram 55
6-3. Circuit Boards Location 58
6-4. Printed Wiring Boards and Schematic Diagrams 58
• A Board 59
• G Board 66
• PT Board 73
• CR, CG, CB Boards 79
• Z Board 83
• HA Board 85
6-5. Semiconductors 87

7. EXPLODED VIEWS

7-1. Cover (KP-41T65) 89
7-2. Cover (KP-46C65/48S65/53S65) 90
7-3. Cover (KP-61S65) 91
7-4. Chassis (KP-41T65) 92
7-5. Chassis (KP-46C65/48S65/53S65/61S65) 93
7-6. Picture Tube (KP-41T65) 94
7-7. Picture Tube (KP-46C65/48S65/53S65/61S65) 95

8. ELECTRICAL PARTS LIST 96

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESECOMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFEOPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE DELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DEPANNAGE.
LE CHÁSSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDÉ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNEIMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SECTION 1
GENERAL

The operating instructions mentioned here partial abstracts from the Operating Instructions Manual. The page numbers of the Operating Instruction Manual remain as in the manual.(part.no : 3-862-541-31)

Welcome!

Thank you for purchasing the Sony Color Rear Video Projection TV. Here are some of the features you will enjoy with your projection TV:

- On-screen menus that let you set the picture quality, sound, and other settings.
- Two tuner Picture-in-Picture (PIP) that allows you to watch another TV channel, video or cable image as a window picture.
- Surround system that simulates the sound quality of a concert hall or movie theater.
- SAVA SPEAKER option of the AUDIO menu that lets you take advantage of the Sony SAVA series speaker system's surround sound and super woofer mode when you connect it to the projection TV.

About this manual

The instructions in this manual are for models KP-41T65, KP-46C65, KP-48S65, KP-53S65, and KP-61S65. Before you start reading this manual, please check your model number, located at the rear of the projection TV. Model KP-53S65 is used for illustration purposes in this manual. Any differences in operation are clearly indicated in the text, for example "*KP-61T65 only.*" The differences in specifications are indicated in the text.

Instructions in this manual are based on use of the remote control. You can also use the controls on the projection TV if they have the same name as those on the remote control.

Precautions

This projection TV operates on extremely high voltage. To prevent fire or electric shock, please follow the precautions below.

Safety

- Operate the projection TV only on 120 V AC.
- One blade of the plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the projection TV and have it checked by qualified personnel before operating it further.
- Unplug the projection TV from the wall outlet if you are not going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

For details concerning safety precautions, see the supplied leaflet "IMPORTANT SAFEGUARDS."

Note on cleaning

Clean the cabinet of the projection TV with a dry soft cloth. To remove dust from the screen, wipe it gently with a soft cloth using vertical strokes only. Stubborn stains may be removed with a cloth slightly dampened with solution of mild soap and warm water. Never use strong solvents such as thinner or benzine for cleaning. If the picture becomes dark after using the projection TV for a long period of time, it may be necessary to clean the inside of the projection TV. Consult qualified service personnel.

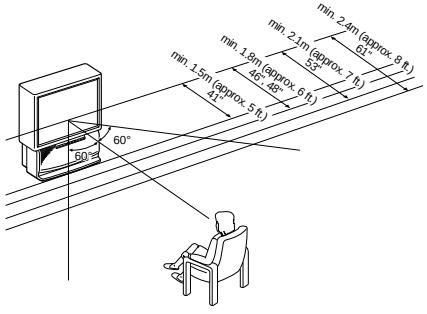
Installing

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the projection TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.
- Avoid operating the projection TV at temperatures below 5°C (41°F).
- If the projection TV is transported directly from a cold to a warm location, or if the room temperature has changed suddenly, the picture may be blurred or show poor color. This is because moisture has condensed on the mirror or lenses inside. If this happens, let the moisture evaporate before using the projection TV.
- To obtain the best picture, do not expose the screen to direct illumination or direct sunlight. It is recommended to use spot lighting directed down from the ceiling or to cover the windows that face the screen with opaque drapery. It is desirable to install the projection TV in a room where the floor and walls are not of reflecting material. If necessary, cover them with dark carpeting or wall paper.

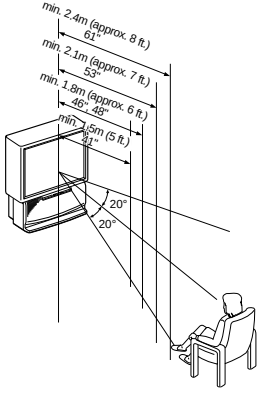
Step 1: Installing the projection TV

For the best picture quality, install the projection TV within the areas shown below.

Optimum viewing area (Horizontal)



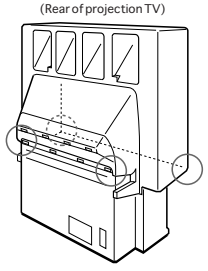
Optimum viewing area (Vertical)



Carrying your projection TV

■ ***KP-41T65/46C65/48S65/53S65 only***

Be sure to grasp the areas indicated when carrying the projection TV, and to use more than two people.



■ ***KP-61S65 only***

Carry your projection TV by the casters.

EN

Preparing for your projection TV

Before you use your projection TV, adjust convergence. For the procedure, see "Step 4: Setting up the projection TV automatically (AUTO SET UP)" on page 14.

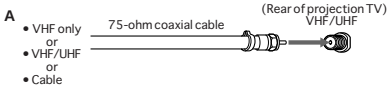
Step 2: Hookup

Although you can use either an indoor or outdoor antenna with your projection TV, we recommend that you connect an outdoor antenna or a cable TV system to get better picture quality.

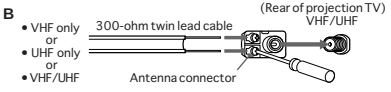
Connecting an antenna

Connect your antenna cable to the VHF/UHF antenna terminal. If you cannot connect your antenna cable directly to the terminal, follow one of the instructions below depending on your cable type.

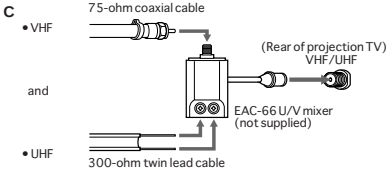
A



B



C

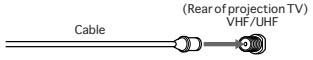


Notes

- Most VHF/UHF combination antennas have a signal splitter. Remove the splitter before attaching the appropriate connector.
- If you use the U/V mixer, snow and noise may appear in the picture when viewing cable TV channels over 37.

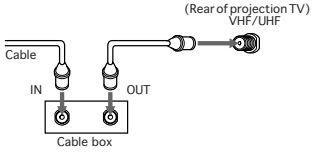
Connecting an antenna/cable TV system without a VCR

To cable or antenna

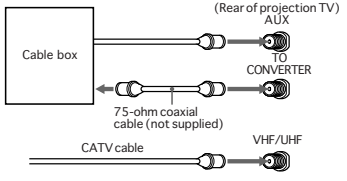


To cable box

If your cable company requires you to connect a cable box, make the connection as follows:



To cable box and cable



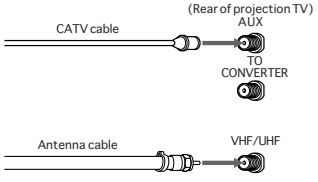
Pay cable TV systems use scrambled or encoded signals requiring a cable box* in addition to the normal cable connection.

* The cable box will be supplied by the cable company.

Note

- You cannot watch the signal through an AUX connector as a window picture.

To cable and antenna



Note

- Do not connect anything to the TO CONVERTER connector in this case.

Connecting an antenna/cable TV system with a VCR

For details on connection, see your VCR instruction manual.
Before making the connection, disconnect the AC power cords of the equipment to be connected.

After making these connections, you will be able to do the following:

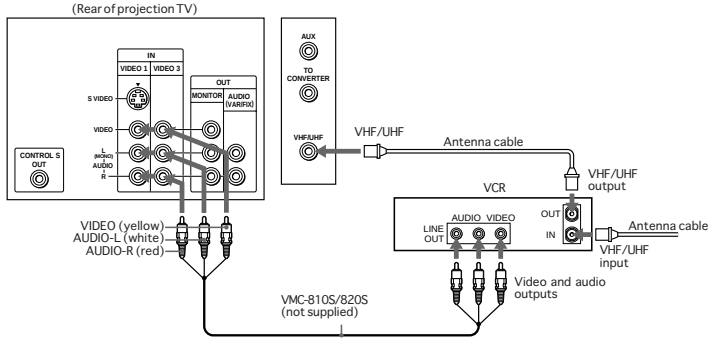
- View the playback of video tapes
- Record one TV program while viewing another program
- Watch two TV programs at once using PIP

To a conventional VCR

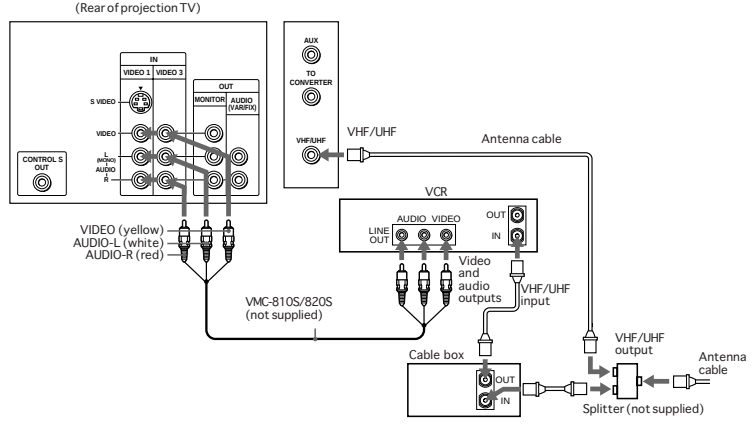
Notes

- To connect a monaural VCR, connect the audio output of the VCR to AUDIO-L (MONO) of VIDEO 1/2/3 IN on the projection TV.

Without a cable box



With a cable box

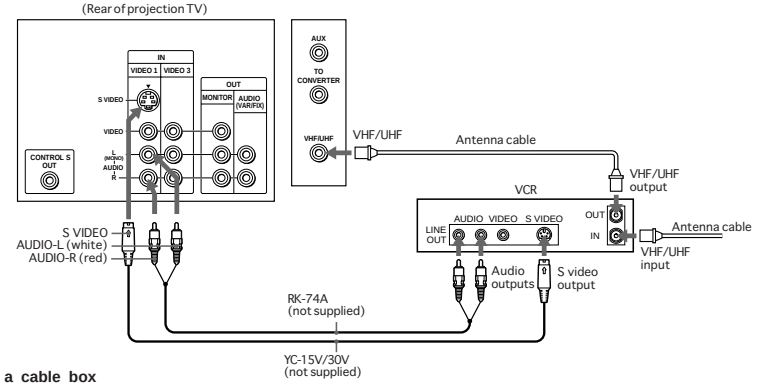


EN

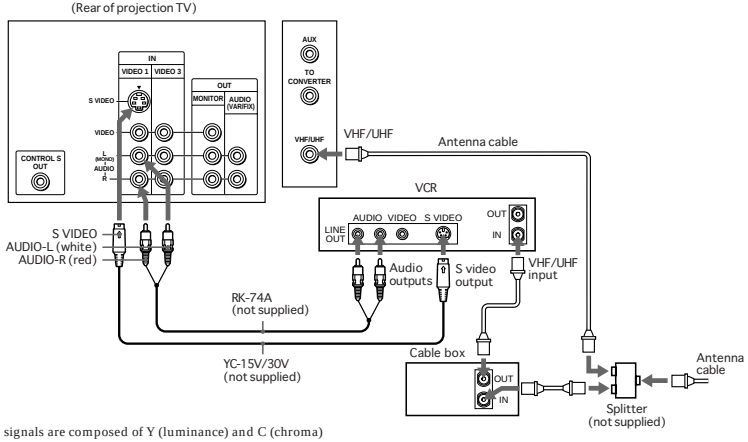
To an S video equipped VCR

If your VCR has an S VIDEO output connector, make the following connections.
Whenever you connect the cable to the S VIDEO input connector, the projection TV automatically receives S video signals.

Without a cable box



With a cable box



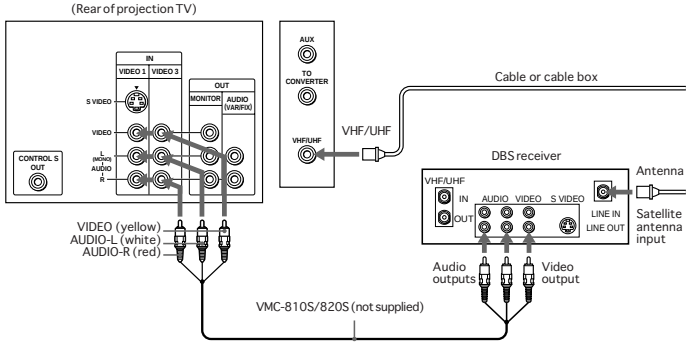
Note

- Video signals are composed of Y (luminance) and C (chroma) signals. The S connection sends the two signals separately preventing degradation, and gives better picture quality compared to conventional connections.

Connecting a DBS receiver

For details on connection, see the instruction manual of the DBS (Digital Broadcasting Satellites) receiver.

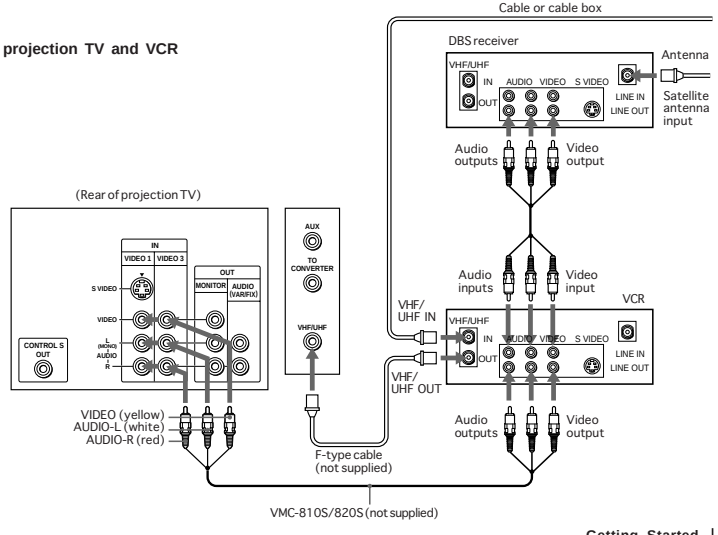
To a projection TV



Note

- You can use the S VIDEO connector or the composite video connector for the video connection.

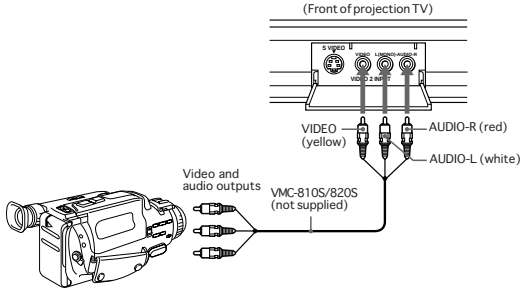
To a projection TV and VCR



EN

Connecting a camcorder

Use this connection to view a camcorder picture.

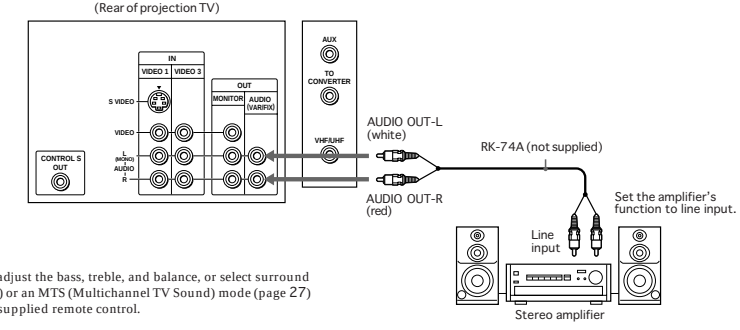


Note

- To connect a monaural camcorder, connect the audio output of the camcorder to AUDIO-L (MONO) of VIDEO 2 INPUT on the projection TV.

Connecting an audio system

When connecting audio equipment, see page 28 for more information.

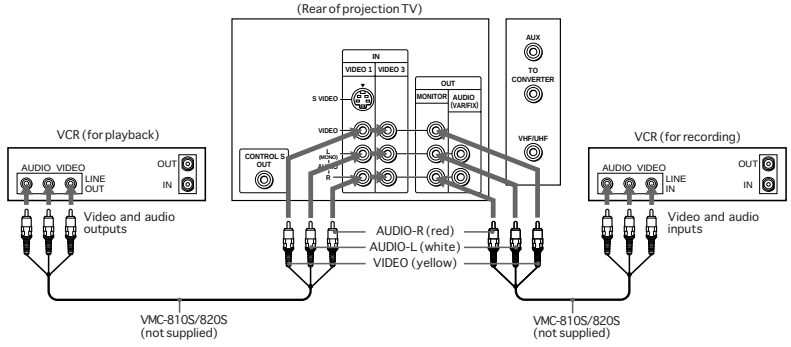


Note

- You can adjust the bass, treble, and balance, or select surround (page 26) or an MTS (Multichannel TV Sound) mode (page 27) with the supplied remote control.

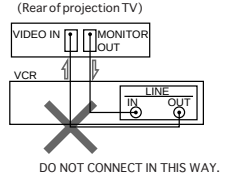
Connecting two VCRs for tape editing using MONITOR OUT

You can record input images displayed on the screen. This type of connection should be used only when you connect from the line input of one VCR, and from the line output of a second VCR.



Notes

- Do not change the input signal while editing through MONITOR OUT, or the output signal will also change.
- You can use the S video jack to connect a VCR for playback and the composite video connector to connect a VCR for recording.
- When connecting a single VCR to the projection TV, do not connect the MONITOR OUT to the VCR's line input, while at the same time connecting from the projection TV's VIDEO IN connectors to the VCR's line output, as shown below.

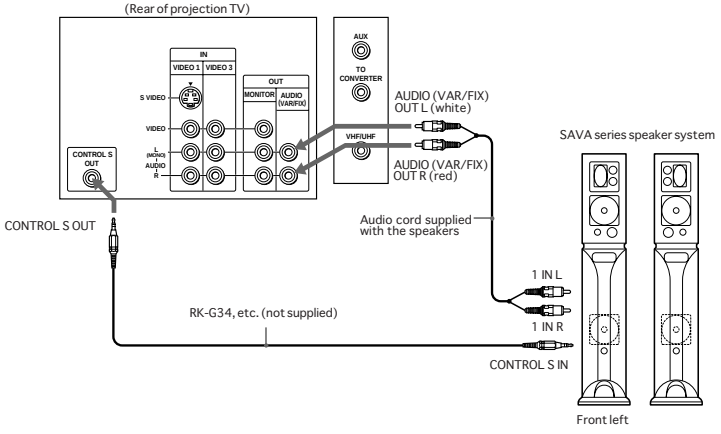


EN

Connecting a Sony SAVA series speaker system

If you have a Sony SAVA series speaker system, connect your speakers to the AUDIO (VAR/FIX) OUT jacks on the rear of the projection TV with the audio cable supplied with the speakers. You can take advantage of the speakers' Dolby Pro Logic* surround system and super woofer mode, and control them with the supplied remote control. When connecting a Sony SAVA series speaker system, see page 27 for more information.

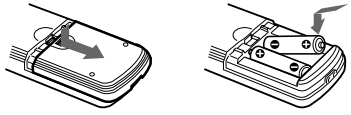
* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under Canadian patent number 1,037,877. "Dolby," the double-D symbol ◻◻ and "Pro Logic" are trademarks of Dolby Laboratories Licensing Corporation.



Step 3: Setting up the remote control

Inserting batteries

Insert two size AA (R6) batteries (supplied) by matching the + and – on the battery to the diagram inside the battery compartment.



Notes

- Under normal conditions, batteries will last up to six months. If the remote control does not operate properly or the indicators of the buttons on the remote control do not light up, the batteries may be worn out. When replacing batteries, replace both of them with new ones.
- Do not mix old batteries with new ones or mix different types of batteries together.
- If the electrolyte inside the battery should leak, wipe the contaminated area of the battery compartment with a cloth and replace the old batteries with new ones. To prevent the electrolyte from leaking, remove the batteries when you don't plan to use the remote control for a long period of time.
- Do not handle the remote control roughly. Do not drop it, step on it, or let it get wet.
- Do not place the remote control in direct sunlight, near a heater, or where the humidity is high.

Getting to know buttons on the remote control

Names of buttons on the remote control are indicated in different colors to represent the available functions.

Button color

Transparent (light up) ..... TV / VCR / DBS / Cable box function buttons. Press the appropriate function button first to change the remote control's function.

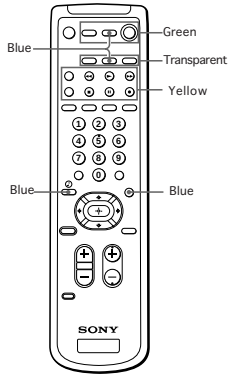
Green ..... Buttons relevant to power operations.

Label color

White ..... TV / VCR / DBS / Cable box operation buttons.

Yellow ..... PIP operation buttons.

Blue ..... DBS operation buttons.



EN

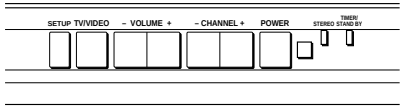
– 9 –

Step 4: Setting up the projection TV automatically

(AUTO SET UP)

You can set up your projection TV easily by using the AUTO SET UP feature. It presets all the receivable channels, adjusts the convergence and changes the on-screen menu language. To set up the projection TV manually, see "Adjusting convergence" (page 16), "Setting cable TV on or off" (page 17), "Presetting channels" (page 18) and "Changing the menu language" (page 18).
If the projection TV is set to a video input, you cannot perform AUTO SET UP. Press TV / VIDEO so that a channel number appears.

(Front of projection TV)



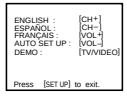
Before you start using AUTO SET UP, be sure to connect the antenna or cable to the projection TV (see page 6).

1 Press POWER to turn the projection TV on.

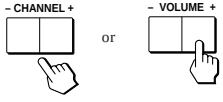


2 Press SETUP on the front of the projection TV.
AUTO SET UP screen appears.



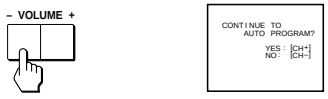


3 Press CHANNEL +/– or VOLUME + to select the on-screen menu language.
If you prefer Spanish or French to English, you can change the on-screen menu language.

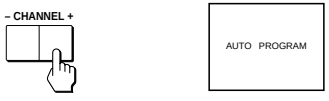


All of the menus will be set to the factory preset condition in the selected language.

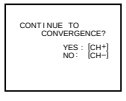
4 Press VOLUME – to start AUTO SET UP.



5 Press CHANNEL + to preset channels.

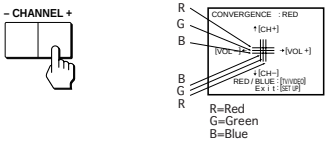


"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the following menu appears. If the projection TV receives cable TV channels, CABLE is set to ON automatically.



To exit AUTO PROGRAM
Press any button.

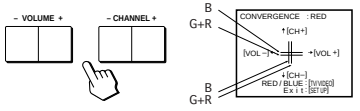
6 Adjust convergence.
(1) Press CHANNEL +.
The CONVERGENCE adjustment screen appears.



(2) Press TV / VIDEO to select RED or BLUE.

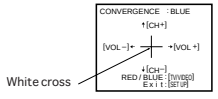


(3) Using CHANNEL + / – or VOLUME + / –, move the line until it converges with the center green line.



To move horizontal line up / down, press CHANNEL + / –.
To move vertical line right / left, press VOLUME + / –.

(4) Repeat steps (2) and (3) to adjust the other lines until all three lines converge and are seen as a white cross.



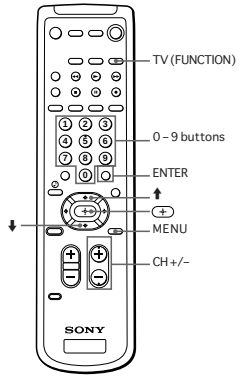
Note
- Using the AUX connector, press TV (black button) first and make sure that "AUX" is displayed beside the channel number on the screen. Then follow the steps 2 to 6 above to perform AUTO SET UP.

To preview the main functions (DEMO)
Press TV / VIDEO on the projection TV in step 4. The functions and menus are displayed one by one.

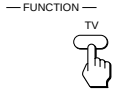
To exit DEMO
Press any button.

Erasing or adding channels

After AUTO SET UP, you can erase unnecessary channels or add the channels you want. Preset channels during the day rather than late at night, when some channels may not be broadcasting.

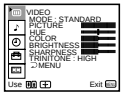


1 Press TV (FUNCTION).

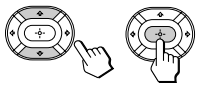


2 Press MENU.
The main menu appears.





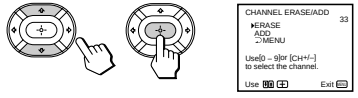
3 Press ↑ or ↓ to select 🖨, and press ⊕.
The SET UP menu appears.





EN

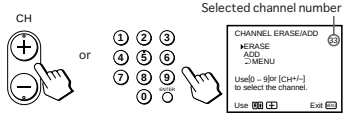
4 **Press ↑ or ↓ to select CHANNEL ERASE/ADD, and press ⊕.**
The CHANNEL ERASE/ADD menu appears.



5 **Erase and/or add channels:**

To erase an unwanted channel

(1) Make sure the cursor (▶) is beside ERASE.
(2) Press CH + / – or the 0 – 9 buttons to select the channel you want to erase, and press ENTER.

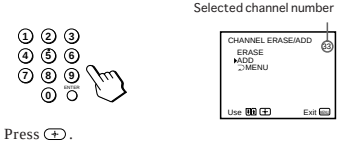


(3) Press ⊕.
The "–" indication appears beside the channel number, showing that the channel is erased from the preset memory.



To add a channel that you want

(1) Press ↑ or ↓ to move the cursor (▶) to ADD.
(2) Press the 0 – 9 buttons to select the channel you want to add, and press ENTER.



(3) Press ⊕.
The "+" indication appears beside the channel number, showing that the channel is added to the preset memory.



6 **To erase and/or add other channels, repeat step 5.**

7 **Press MENU to return to the original screen.**



Notes

- If you erase or add a VHF or UHF channel, the cable TV channel with the same number is also erased or added, and vice versa.
- Erasing and adding channels is also available for the AUX input.

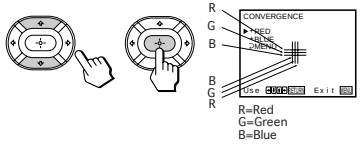
Adjusting convergence (CONVERGENCE)

The projection tube image appears on the screen in three layers (red, green and blue). If they do not converge, the color is poor and the picture blurs. To correct this, adjust convergence.
You do not have to do this procedure if you perform AUTO SET UP (page 14). Do this procedure only when you want to adjust it manually.

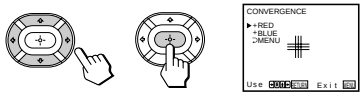
1 **Press MENU.**

2 **Press ↑ or ↓ to select 🖷, and press ⊕.**

3 **Press ↑ or ↓ to select CONVERGENCE, and press ⊕.**
The CONVERGENCE adjustment screen appears.

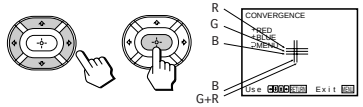


4 **Press ↑, ←, ↓, or → to move the cursor (▶) to the symbol showing the line you want to adjust, and press ⊕.**



+RED : Red vertical and horizontal line (left / right / up / down adjustment)
+BLUE : Blue vertical and horizontal line (left / right / up / down adjustment)

5 **Press ↑, ←, ↓, or → to move the line until it converges with the center green line, and press ⊕.**



To move	Press
Up	↑
Down	↓
Right	→
Left	←

6 **Repeat steps 4 and 5 to adjust the other lines until all three lines converge and are seen as a white cross.**

7 **Press MENU to return to the original screen.**

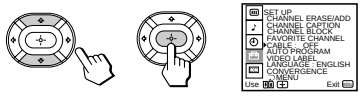
Setting cable TV on or off

If you have connected the projection TV to a cable TV system, set CABLE to ON (the factory setting). If not, set CABLE to OFF.
You do not have to do this procedure if you perform AUTO SET UP (page 14). Do this procedure only when you want to set it manually.

1 **Press MENU.**

2 **Press ↑ or ↓ to select 🖷, and press ⊕.**

3 **Set CABLE to ON or OFF:**
(1) Press ↑ or ↓ to move the cursor (▶) to CABLE, and press ⊕.
(2) Press ↑ or ↓ to select ON or OFF, and press ⊕.



4 **Press MENU to return to the original screen.**

Note

- If CABLE appears in gray, the projection TV is set to a video input and you cannot select CABLE. Press TV (black button) so that a channel number appears.

EN

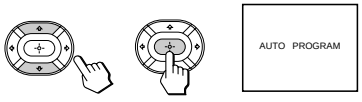
Presetting channels

You can preset TV channels easily by using the AUTO PROGRAM feature.
You do not have to do this procedure if you perform AUTO SET UP (page 14). Do this procedure only when you want to set it manually.

1 Press MENU.

2 Press ↑ or ↓ to select 🖷, and press ⊕.

3 Press ↑ or ↓ to select AUTO PROGRAM, and press ⊕.



"AUTO PROGRAM" appears on the screen and the projection TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed.

4 Press MENU to return to the original screen.

To exit AUTO PROGRAM
Press any button.

Notes
- If the AUTO PROGRAM menu appears in gray, the projection TV is set to a video input and you cannot select AUTO PROGRAM. Press ANT button so that a channel number appears.
- Presetting channels is also available for the AUX input.

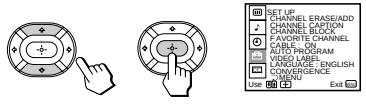
Changing the menu language

If you prefer Spanish or French to English, you can change the menu language.
You do not have to do this procedure if you select the language during AUTO SET UP (page 14). Do this procedure only when you want to set it manually.

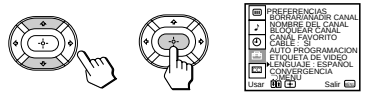
1 Press MENU.

2 Press ↑ or ↓ to select 🖷, and press ⊕.

3 Press ↑ or ↓ to select LANGUAGE, and press ⊕.



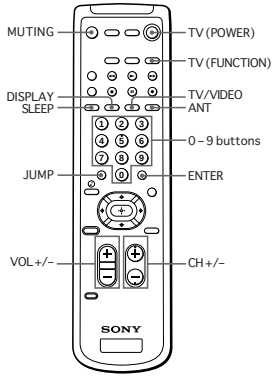
4 Press ↑ or ↓ to select your favorite language, "ENGLISH", "ESPAÑOL," or "FRANÇAIS" and press ⊕.



5 Press MENU to return to the original screen.

Note
- Certain parts of the Spanish or French menus remain in English.

Watching the TV



1 Press TV (POWER) to turn on the projection TV.
The TIMER / STANDBY indicator flashes until the picture appears.



If "VIDEO" appears on the screen, press ANT so that a channel number appears.

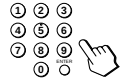
2 Press TV (FUNCTION).



Once you press TV (FUNCTION), the projection TV function is set unless another function button is pressed.

3 Select the channel you want:

To select a channel directly
Press the 0 – 9 buttons, and press ENTER.
For example, to select channel 10, press 1, 0 and ENTER.



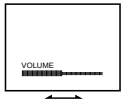
To scan through channels
Press CH + / – until the channel you want appears.



The channel can also be selected without pressing ENTER.

4 Press VOL +/– to adjust the volume.





EN

Switching quickly between two channels

You can use the JUMP button to switch or "jump" back and forth between two channels.

Press JUMP.



Pressing JUMP again switches the channel back to the one you selected last.

Note
- You cannot jump to channels you scanned through using the CH + / – buttons.

Muting the sound

Press MUTING.
"MUTING" appears on the screen.



To restore the sound, press MUTING again, or press VOL +.

Displaying on-screen information

Press DISPLAY repeatedly until the desired display appears.
Each time you press DISPLAY, the display changes as follows:

Status display* → XDS ON** → CC 1 ON*** → DISPLAY OFF →



* Channel number, the current time, channel caption (if set), and MTS mode (if SAP is selected) are displayed. SAP indication disappears after three seconds.
** Some programs are broadcast with XDS (Extended Data Service) which shows a network name, program name, program type, program length, call letters, and time of the show. When you select XDS with the DISPLAY button, this information will be displayed on the screen if the broadcaster offers this service.
*** Some programs are broadcast with Caption Vision. When you select Caption Vision with the DISPLAY button, Caption Vision will be displayed on the screen if the broadcaster offers this service. (See page 34 for selecting Caption Vision.)

To cancel the display, press DISPLAY repeatedly until "DISPLAY OFF" appears. "DISPLAY OFF" goes off after three seconds.

Setting the Sleep Timer

The projection TV stays on for the length of time you specify and then shuts off automatically.

Press SLEEP repeatedly until the time (minutes) you want appears.
Each time you press SLEEP, the time changes as follows:

30 → 60 → 90 → SLEEP OFF →



To cancel the Sleep Timer, press SLEEP repeatedly until "SLEEP OFF" appears, or turn off the projection TV.

Watching a video input picture

Press TV/VIDEO repeatedly until the desired video input appears.
Each time you press TV / VIDEO, the display changes as follows:

TV → VIDEO 1 → VIDEO 2 → VIDEO 3 →



To return to the TV picture, press ANT so that a channel number appears.

Changing the VHF/UHF input to the AUX input

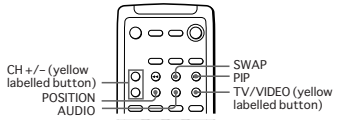
Press ANT.
"AUX" appears beside the channel number.



Pressing ANT again switches back to the VHF / UHF input.

Watching two programs at one time — PIP

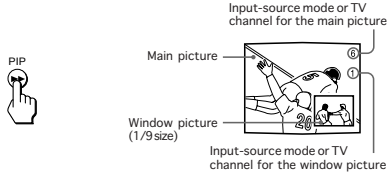
The Picture-in-Picture (PIP) feature allows you to watch both the main picture and a window picture simultaneously.



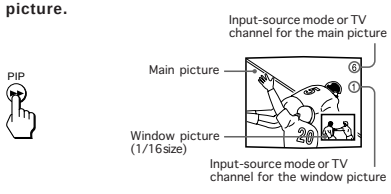
Use the yellow labelled buttons for PIP operations.

Displaying a window picture

Press PIP.



Press PIP again to display a smaller window picture.

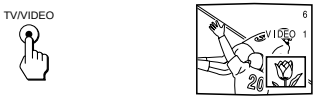


To remove the window picture, press PIP again.

Note
• The window picture may be affected by the condition of the main picture.

Changing the window picture input mode

Press TV/VIDEO (yellow labelled button) to select the input mode.
Each time you press TV / VIDEO (yellow labelled button), "TV", "VIDEO 1", "VIDEO 2", and "VIDEO 3" appear in sequence.



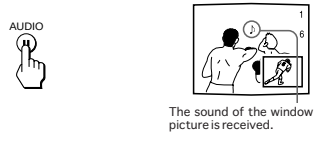
A window picture will appear in the same input mode as the last time you used PIP.

Note
• If you connect your VCR without a cable box, your PIP input source is a VCR. If you connect your VCR with a cable box, your PIP input source is a VCR or cable box.

EN

Listening to the sound of the window picture

Press AUDIO.
The ♪ display appears next to the PIP channel number for a few seconds, indicating that the window picture sound is being received.



To restore the main picture sound, press AUDIO again. The ♪ display moves to the main picture channel number.

Changing TV channels in the window picture

Press CH +/– (yellow labelled button).



Changing the position of the window picture

Press POSITION.

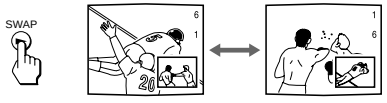
Each time you press POSITION, the window picture will move counterclockwise on the screen.



Swapping the main and window pictures

Press SWAP.

Each time you press SWAP, the images and sound from the main and window pictures switch places with another.

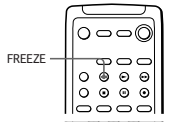


Note

- The channels being received through the AUX connector cannot be displayed as a window picture.

Freezing the picture (FREEZE)

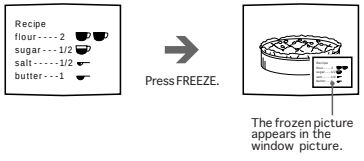
The FREEZE feature is useful when you want to write down an information such as a recipe from a cooking program, a displayed address, or a phone number. The frozen picture changes as follows depending on whether the PIP function is used or not.



Press FREEZE.

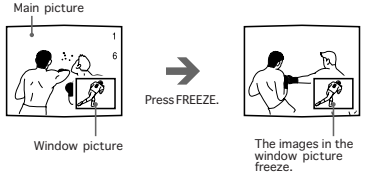


When the PIP function is not being used



To remove the frozen window picture, press FREEZE again.

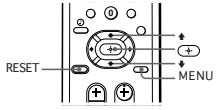
When the PIP function is being used



To cancel the frozen window picture, press FREEZE again.

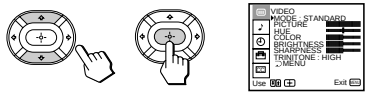
Adjusting the picture (VIDEO)

When watching TV programs, you can adjust the picture to suit your taste.
You can adjust the picture of video input(s) as well.



1 Press MENU.

2 Press ↑ or ↓ to select , and press .



3 Select the item you want to adjust.
For example:

(1) To adjust the brightness, press ↑ or ↓ to move the cursor (▶) to BRIGHTNESS.



(2) Press .



4 Adjust the selected item:

(1) Press ↑, ←, ↓, or → to adjust the item.



(2) Press .
The new setting appears in the VIDEO menu.



For details on each item, see "Description of adjustable items" below.

5 To adjust other items, repeat steps 3 and 4.

6 Press MENU to return to the original screen.

EN

Description of adjustable items

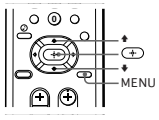
Item	Press ← or ↓ to	Press → or ↑ to
PICTURE	Decrease picture contrast and give soft color.	Increase picture contrast and give vivid color.
HUE	Make picture tones become purplish.	Make picture tones become greenish.
COLOR	Decrease color intensity.	Increase color intensity.
BRIGHTNESS	Darken the picture.	Brighten the picture.
SHARPNESS	Soften the picture.	Sharpen the picture.

To restore the factory settings

Press RESET after displaying and selecting the VIDEO menu.
All of the settings are restored to the factory settings.

Adjusting the color temperature (TRINITONE)

The TRINITONE feature controls the color temperature, permitting white balance preference adjustment without affecting skin tones.



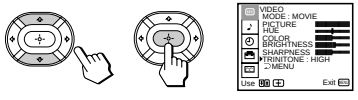
1 **Press MENU.**

2 **Press ↑ or ↓ to select ▤, and press ⊕.**

3 **Press ↑ or ↓ to select TRINITONE and press ⊕.**



4 **Press ↑ or ↓ to select NTSC STD, MEDIUM, or HIGH and press ⊕.**



Choose	To
HIGH	a cool (bluish) white.
MEDIUM	a neutral white.
NTSC STD	a warm (reddish) white.

Selecting the video mode (VIDEO)

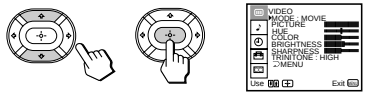
The video mode feature allows you to choose three different modes of picture settings. Choose the one that best suits the type of program that you want to watch.

1 **Press MENU.**

2 **Press ↑ or ↓ to select ▤, and press ⊕.**

3 **Press ↑ or ↓ to select MODE, and press ⊕.**

4 **Press ↑ or ↓ to select STANDARD, MOVIE, or SPORTS mode, and press ⊕.**



Choose	To
STANDARD	Receive a standard picture.
MOVIE	Receive a finely detailed picture.
SPORTS	Receive a vivid, bright picture.

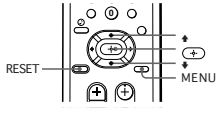
5 **Press MENU to return to the original screen.**

Note

- The settings for these modes can be adjusted in the VIDEO menu.

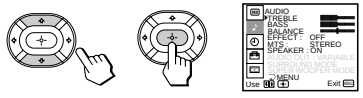
Adjusting the sound (AUDIO)

You can adjust the quality of the TV sound to suit your taste. You can adjust the sound of the video input(s) as well.

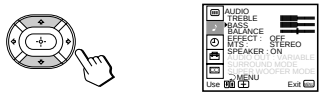


1 **Press MENU.**

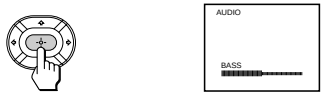
2 **Press ↑ or ↓ to select ♪, and press ⊕.**



3 **Select the item you want to adjust.**
For example:
(1) To adjust bass, press ↑ or ↓ to move the cursor (▶) to BASS.



(2) Press ⊕.



4 **Adjust the selected item:**
(1) Press ↑, ←, ↓, or → to adjust the item.



(2) Press ⊕.
The new setting appears in the AUDIO menu.



For details on each item, see “Description of adjustable items” below.

5 **To adjust other items, repeat steps 3 and 4.**

6 **Press MENU to return to the original screen.**

Description of adjustable items

Item	Press ↓ or ← to	Press ↑ or → to
TREBLE	Decrease the treble response.	Increase the treble response.
BASS	Decrease the bass response.	Increase the bass response.
BALANCE	Emphasize the left speaker’s volume.	Emphasize the right speaker’s volume.

To restore the factory settings

Press RESET after displaying and selecting the AUDIO menu.
All of the settings are restored to the factory settings.

Note

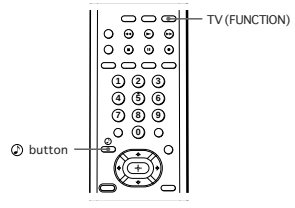
- When SPEAKER (page 27) is OFF and AUDIO OUT (page 28) is in the FIXED condition, the volume, TREBLE, BASS, and BALANCE cannot be adjusted.

EN

Using audio effect (SURROUND)

The audio effect (SURROUND) feature simulates sound reproduction with the atmosphere of a movie theater or a concert hall. Audio effect is only effective for stereo programs.

Using the ◴ (audio effect) button



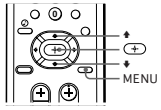
1 Press TV (FUNCTION).

2 Press ◴.
Each time you press the ◴ button, the display changes as follows:

SURROUND → SURROUND OFF



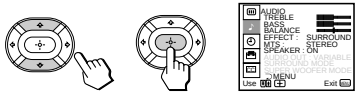
Using the menu to set audio effect



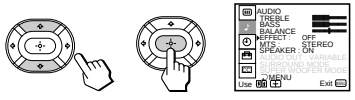
1 Press MENU.

2 Press ↑ or ↓ to select ♪, and press ⊕.

3 Press ↑ or ↓ to select EFFECT, and press ⊕.



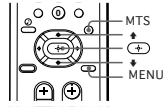
4 Press ↑ or ↓ to select the audio effect mode, and press ⊕.



5 Press MENU to return to the original screen.

Selecting stereo or bilingual programs (MTS)

The Multichannel TV Sound (MTS) feature allows you to enjoy stereo sound or Second Audio Programs (SAP) of your choice. The initial setting is stereo sound (STEREO).



Press MTS repeatedly to select STEREO, SAP, or MONO.

STEREO→SAP→MONO

Choose	To
STEREO	Listen to stereo sound. The STEREO indicator on the projection TV lights up when a stereo broadcast is received.
SAP	Listen to bilingual programs. There is no sound when the SAP signal is not broadcasting.
MONO	Listen to monaural sound. Reduce noise during stereo broadcasts.

Note
- Stereo and SAP sounds are subject to program sources.

To set MTS using the menu

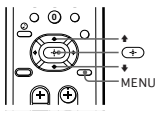
1 Press MENU.
2 Press ↑ or ↓ to select ♪, and press ⊕.
3 Press ↑ or ↓ to select MTS, and press ⊕.
4 Press ↑ or ↓ to select STEREO, SAP, or MONO.
5 Press MENU to return to the original screen.

Setting the speaker switch (SPEAKER)

You may switch off the projection TV speakers when, for example, you want to listen to the sound through a stereo system.

If you connect the Sony SAVA series speaker system to the AUDIO (VAR/FIX) OUT connectors, you can take advantage of the speakers' surround sound and super woofer mode. After making the connections (page 12), set SPEAKER to SAVA SPEAKER, then adjust SURROUND MODE or SUPER WOOFER MODE.

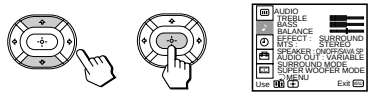
EN



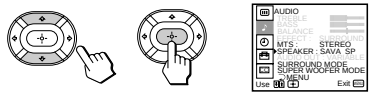
1 Press MENU.

2 Press ↑ or ↓ to select ♪, and press ⊕.

3 Press ↑ or ↓ to select SPEAKER, and press ⊕.



4 Press ↑ or ↓ to select ON, OFF, or SAVA SP, and press ⊕.



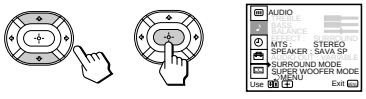
5 Press MENU to return to the original screen.

Choose	To
ON	Listen to the sound from the projection TV.
OFF	Turn off the projection TV speaker sound and listen to the projection TV's sound solely through the audio system speakers.
SAVA SP	Turn off the projection TV speaker sound and listen to the projection TV's sound through the Sony SAVA series speaker system. You can adjust volume, muting, surround modes, and super woofer mode with the remote control supplied with the projection TV.

To select surround sound or super woofer mode of the SAVA speaker system

After setting SPEAKER to SAVA SP, follow the procedure below.

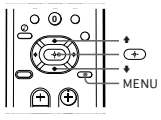
Press ↑ or ↓ to select SURROUND MODE or SUPER WOOFER MODE, and press ⊕.
For details on each option, refer to the operating instructions of the speaker system.



Note
- This feature is only for Sony SAVA speaker system with an operation capability for KP-41T65, KP-46C65, KP-48S65, KP-53S65, and KP-61S65.

Setting audio out (AUDIO OUT)

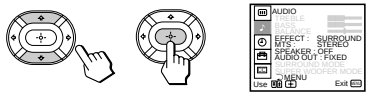
You can change AUDIO OUT to VARIABLE or FIXED when SPEAKER is set to OFF.
AUDIO OUT is variable when SPEAKER is set to ON.



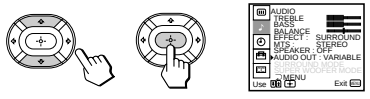
1 Press MENU.

2 Press ↑ or ↓ to select ♪, and press ⊕.

3 Press ↑ or ↓ to select AUDIO OUT, and press ⊕.



4 Press ↑ or ↓ to select VARIABLE or FIXED, and press ⊕.



VARIABLE: Sound output varied according to the projection TV settings. You can adjust the volume, bass, treble, and balance.

FIXED: Sound output is always fixed to a certain level. The volume, bass, treble, and balance are also fixed to the factory settings.

5 Press MENU to return to the original screen.

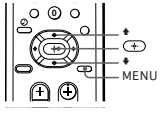
Note
- If AUDIO OUT appears in gray, set SPEAKER to OFF.

Setting daylight saving time (DAYLIGHT SAVING)

If your area uses daylight saving time, change DAYLIGHT SAVING setting depending on the season, before setting the current time.

Daylight saving start
- After the first Sunday in April, set DAYLIGHT SAVING to YES. Current time setting (right column) automatically moves one hour ahead.

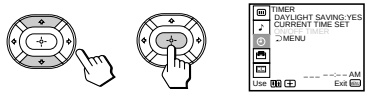
Daylight saving end
- After the last Sunday in October, set DAYLIGHT SAVING to NO. Current time setting automatically moves one hour back.



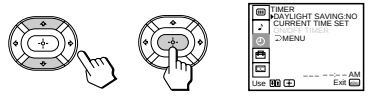
1 Press MENU.

2 Press ↑ or ↓ to select ◴, and press ⊕.

3 Press ↑ or ↓ to select DAYLIGHT SAVING, and press ⊕.



4 Press ↑ or ↓ to select YES or NO, and press ⊕.

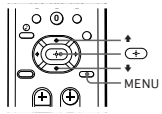


Choose	To
YES	Set for daylight saving start.
NO	Set for daylight saving end.

5 Press MENU to return to the original screen.

Setting the clock (CURRENT TIME SET)

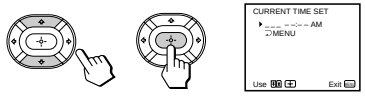
Setting the clock enables you to turn the projection TV on and off with the timer. Make sure to set daylight saving time first.



1 Press MENU.

2 Press ↑ or ↓ to select ◴, and press ⊕.

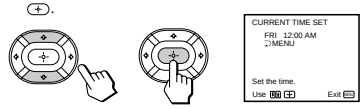
3 Press ↑ or ↓ to select CURRENT TIME SET, and press ⊕.



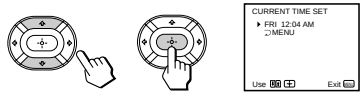
4 Make sure the cursor (▶) is to the left of "--:-- AM," and press ⊕.



5 Set the current day of the week and time.
(1) Press ↑ or ↓ to set the day of the week, and press ⊕.



(2) Set the hour and minutes in the same way as in step (1). When you press ⊕ after setting the minutes, the clock starts.



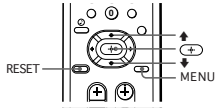
6 Press MENU to return to the original screen.

EN

Setting the timer to turn the projection TV on and off

(ON/OFF TIMER)

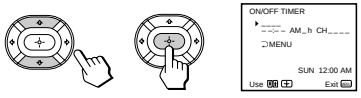
You can set the projection TV to turn on and off at the times you specify. Make sure the clock is set correctly. If it is not, set the clock first (page 29).



1 Press MENU.

2 Press ↑ or ↓ to select ◴, and press ⊕.

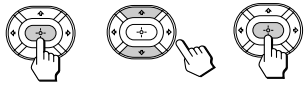
3 Press ↑ or ↓ to select ON/OFF TIMER, and press ⊕.



4 Press ⊕ and enter the ON/OFF TIMER setting.

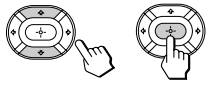
(1) Press ↑ or ↓ to set the day(s), and press ⊕.

Each time you press ↑ or ↓, the days cycle as follows:
EVERY SUN–SAT→EVERY MON–FRI→ SUNDAY→...→SATURDAY→EVERY SUNDAY→...→EVERY SATURDAY





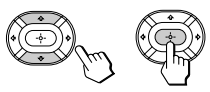
(2) Press ↑ or ↓ to set the time (hour then minutes) that you want to turn on the projection TV, and press ⊕.





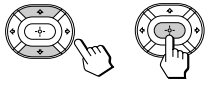
(3) Press ↑ or ↓ to set the time duration, and press ⊕.

Each time you press ↑, the time duration increases by one hour up to a maximum of six hours.





(4) Press ↑ or ↓ to select the channel, and press ⊕.





The TIMER indicator on the projection TV lights up.

5 To set the other program, press ⊕, and repeat step 4.

6 Press MENU to return to the original screen.

One minute before the projection TV turns off, the message "TV will turn off soon." is displayed on the screen.

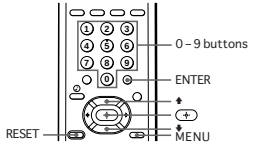
To cancel the timer
In step 3 or 4, press RESET.

Note
- If you unplug the projection TV or a power interruption occurs, the ON / OFF TIMER setting will be erased. Reset the current time, then set the timer.

Customizing the channel names

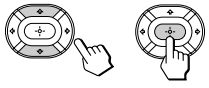
(CHANNEL CAPTION)

You can add a caption for up to 12 channels. This feature allows you to easily identify which channel you are watching. You can make your own caption.



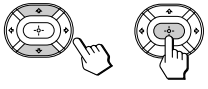
1 Press MENU.

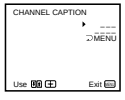
2 Press ↑ or ↓ to select 🖴, and press ⊕.



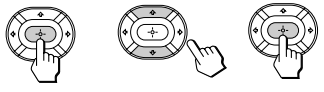


3 Press ↑ or ↓ to select CHANNEL CAPTION, and press ⊕.





4 Press ⊕ and press ↑ or ↓ to select the channel that you want to caption, and press ⊕.



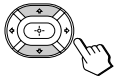


5 Enter the letters (up to four) to caption the channel:

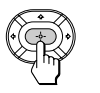
(1) Press ↑ or ↓ to select the first letter.

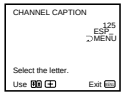
Each time you press ↑ or ↓, the letter changes as follows:

0...9↔A...Z↔&,+,/,_(blank space)



(2) Press ⊕.





(3) Repeat steps (1) and (2) to select the remaining letters, and press ⊕.

6 Repeat steps 4 and 5 to caption other channels.

7 Press MENU to return to the original screen.

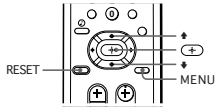
After you customize the channel, the channel caption appears green.

To erase a caption
In step 5, press RESET.

Notes
- If the CHANNEL CAPTION menu appears in gray, the projection TV is set to a video input, and you cannot select CHANNEL CAPTION. Press TV (black button) so that a channel number appears.
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.
- The channel caption feature is not available for the AUX input.

Blocking out a channel (CHANNEL BLOCK)

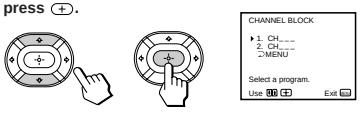
The channel block feature allows you to prevent children from watching unsuitable programs. You can block out two channels.



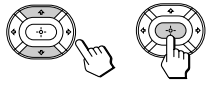
1 **Press MENU.**

2 **Press ↑ or ↓ to select 🧰, and press ⊕.**

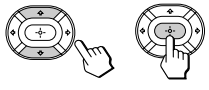
3 **Press ↑ or ↓ to select CHANNEL BLOCK, and press ⊕.**



4 **Press ↑ or ↓ to select program 1 or 2, and press ⊕.**

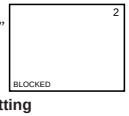


5 **Press ↑ or ↓ to select the channel which you want to block out, and press ⊕.**



6 **Press MENU to return to the original screen.**

When you select the blocked channel, the message "BLOCKED" appears on the screen.



To cancel a CHANNEL BLOCK setting

In step 4 or 5, press RESET.

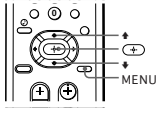
Note

- Once you use CHANNEL BLOCK, Caption Vision and XDS of the blocked channel and the selected channel output from MONITOR OUT are also blocked out.

Setting your favorite channels (FAVORITE CHANNEL)

The favorite channel feature allows your projection TV to memorize your favorite channels easily.
If you set to AUTO, the last five channels you selected with the 0 – 9 buttons are automatically set as your favorite channels. If you want to input your own selection of channels, set to MANUAL.

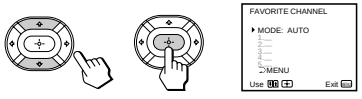
Setting your favorite channels



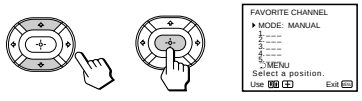
1 **Press MENU.**

2 **Press ↑ or ↓ to select 🧰, and press ⊕.**

3 **Press ↑ or ↓ to select FAVORITE CHANNEL, and press ⊕.**



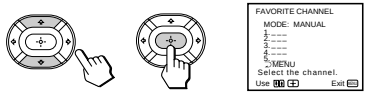
4 **Press ⊕ and press ↑ or ↓ to select AUTO or MANUAL, and press ⊕.**



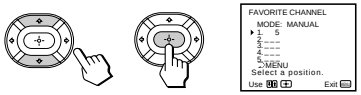
If you select AUTO, skip steps 5 and 6.
The last five channels you selected with the 0 – 9 buttons are automatically set as your favorite channels.

If you select MANUAL, the favorite channel numbers become white, indicating that favorite channels can be entered.

5 **Press ↑ or ↓ to select a favorite channel number, and press ⊕.**



6 **Press ↑ or ↓ to select the channel that you want to set as your favorite channel, and press ⊕.**

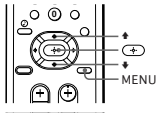


7 **Press MENU to return to the original screen.**

Notes

- If the FAVORITE CHANNEL menu appears in gray, the projection TV is set to a video input and you cannot select FAVORITE CHANNEL.
- If more than 90 seconds elapse after you press another button, the menu disappears automatically.
- The favorite channel feature is not available for the AUX input.

Selecting your favorite channel



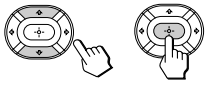
1 **Press ⊕.**

The FAVORITE CHANNEL menu appears.



2 **Press ↑ or ↓ to select the favorite channel you want to watch, and press ⊕.**

The selected channel appears on the screen.

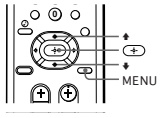


To cancel the FAVORITE CHANNEL menu

Press ↑ or ↓ to select "Exit," and press ⊕.

Setting video labels (VIDEO LABEL)

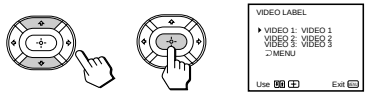
The video label feature allows you to label each input mode so that you can easily identify the connected equipment. For example, you can label VIDEO 1 as VHS.



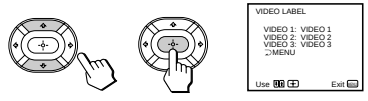
1 **Press MENU.**

2 **Press ↑ or ↓ to select 🧰, and press ⊕.**

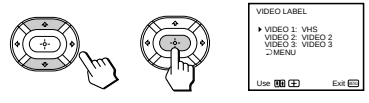
3 **Press ↑ or ↓ to select VIDEO LABEL, and press ⊕.**



4 **Press ↑ or ↓ to select the input mode you want to label, and press ⊕.**



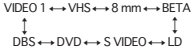
5 **Press ↑ or ↓ to select the label, and press ⊕.**



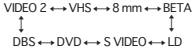
EN

Each time you press ↑ or ↓, the label changes as follows:

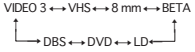
VIDEO 1



VIDEO 2



VIDEO 3



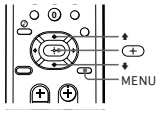
6 Repeat steps 4 and 5 to label other input modes.

Note

- If more than 90 seconds elapse before you press another button, the menu disappears automatically.

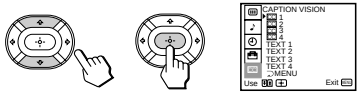
Setting Caption Vision (CAPTION VISION)

Some programs are broadcast with Caption Vision. To display Caption Vision, select either CC1, CC2, CC3, CC4, TEXT1, TEXT2, TEXT3, or TEXT4 from the menu. CC1, CC2, CC3, or CC4 shows you on-screen version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.) TEXT1, TEXT2, TEXT3, or TEXT4 shows you on-screen information presented using either half or the whole screen. It is not usually related to the program.

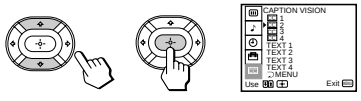


1 Press MENU.

2 Press ↑ or ↓ to select CC, and press ⊕.



3 Press ↑ or ↓ to select the caption type, and press ⊕.



4 Press MENU to return to the original screen.

To display Caption Vision

Press DISPLAY. (See page 20 for details.)

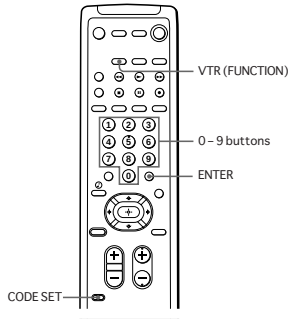
Notes

- Poor reception of TV programs can cause errors in Caption Vision and XDS.
  Captions may appear with a white box or other errors instead of a certain word.
- XDS, Caption Vision, and the status display cannot be used at the same time.
- For details on XDS, see page 20.

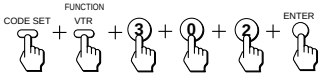
Operating video equipment

You can use the supplied remote control to operate Sony or non-Sony video equipment that has an infrared remote sensor. For this operation, set the manufacturer's code number.

Setting the manufacturer's code



Press the CODE SET, VTR (FUNCTION), and 0 – 9 buttons to enter the manufacturer's code number (see the chart on page 35-36), then press ENTER.
For example, to operate a Sony 8 mm VCR, press CODE SET, VTR (FUNCTION), 3, 0, 2, and ENTER.



VCR manufacturer code numbers

Manufacturer	Code number
Sony	301, 302, 303
Aiwa	338
Audio Dynamic	314, 337
Bell & Howell (M. Wards)	330, 343
Brocsonic	319
Canon	309, 308
Citizen	332
Craig	315, 302, 332
Curtis Mathis	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318
Fisher	330, 334, 335, 333
Funai	338
General Electric	329, 304, 309
Goldstar	332
Hitachi	306, 304, 305
Instant Replay	309, 308
JC Penny	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 333, 334, 330, 335
Magnavox	308, 309
Marantz	314, 336, 337
Marta	332
Memorex	309, 335
Minolta	305, 304
Mitsubishi / MGA	323, 324, 325, 326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	308, 309
Pioneer	308
Quasar	308, 309
RCA / PROSCAN	304, 305, 308, 309, 311, 312, 313
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Singer	315
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 328
Shintom	315
Signature 2000 (M. Wards)	338, 327
Sylvania	308, 309, 338
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
Technics	309, 308
Toshiba	312, 311
Wards	327, 328, 335, 331, 332
Yamaha	330, 314, 336, 337
Zenith	331

EN

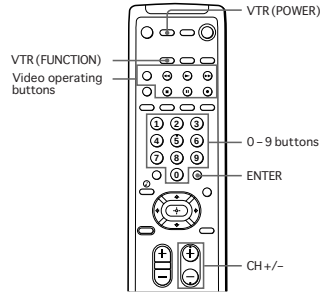
MDP manufacturer code numbers

Manufacturer	Code number
Sony	701
Kenwood	707
Magnavox	703
Maranz	702
Mitsubishi	702
Panasonic	704
Philips	703
Pioneer	702
RCA	702
Sanyo	706
Sharp	705
Yamaha	703

Notes

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied remote control. This is because your equipment may use a code that is not included with this remote control. In this case, please use the equipment's own remote control unit.
- The code numbers for Sony equipment are assigned at the factory as follows:
  VHS VCR 301 (preset code for the supplied remote control)
  8 mm VCR 302
  Beta, ED Beta VCRs 303
- Whenever you remove the batteries — to replace them, for example — if too much time is taken, the code number may revert to the factory setting and must be reset.

Operating video equipment



Use the video operating buttons on the remote control to operate the video equipment. Press VTR (FUNCTION) before operating the video equipment.

Operating a VCR	Buttons on the remote control
To turn on or off	Press VTR (POWER).
To select a channel directly	Press the 0 – 9 buttons.
To change channels	Press CH +/–.
To record	Press ► while pressing ●. First release ►, then release ●.
To play	Press ►.
To stop	Press ■.
To fast forward	Press ▶▶.
To rewind the tape	Press ◀◀.
To pause	Press ❚❚. To resume normal playback, press again.
To search the picture forward or backward	Press ▶▶ or ◀◀ during playback. To resume normal playback, release the button.
To change input mode	Press TV / VTR.

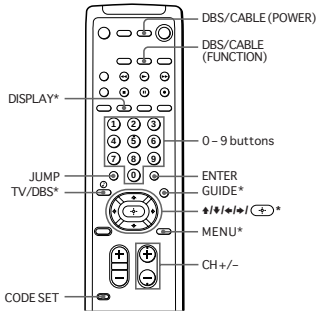
Operating an MDP	Buttons on the remote control
To turn on or off	Press VTR (POWER).
To play	Press ►.
To stop	Press ■.
To pause	Press ❚❚. To resume normal playback, press again.
To search the picture forward or backward	Keep pressing ▶▶ or ◀◀ during playback. To resume normal playback, release the button.
To search the chapter forward and backward	Press CH +/–.

Note

- If the video equipment does not have a certain function, the corresponding button on this remote control will not operate.

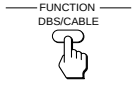
Operating a cable box or DBS receiver

You can program the supplied remote control to operate a cable box or DBS receiver. Follow the procedures below to set the manufacturer's code number in the remote control.

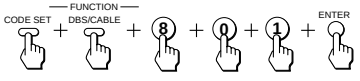


* The TV / DBS, GUIDE, DISPLAY, ↑/↓/←/→/⊕, and MENU buttons can be used only with a DBS receiver.

1 Turn off the equipment you want to set up, and press DBS/CABLE (FUNCTION).



2 Press the CODE SET, DBS/CABLE (FUNCTION), and 0 – 9 buttons to enter the manufacturer's code number (see the chart on the right column), then press ENTER. For example, to program your remote control to operate a Sony DBS receiver, press CODE SET, DBS/CABLE (FUNCTION), 8, 0, 1, and ENTER.



3 Press DBS/CABLE (POWER) to turn on the cable box or DBS receiver.



4 Use the cable box/DBS control buttons to check if the code number works.
For example, to operate a cable box or DBS receiver, you can use the DBS / CABLE (POWER), JUMP, CH +/–, 0 – 9 and ENTER buttons.

Note

- If the cable box or DBS receiver does not have a certain function, the corresponding button on this remote control will not operate.

To operate the projection TV
Press TV (FUNCTION). Then use the projection TV control buttons to control the projection TV.

For more details on operating the cable box or DBS receiver
Refer to the operating instructions that come with the equipment.

EN

If the remote control doesn't work

- First, try repeating the setup procedures using the other codes listed for your equipment.

Manufacturer code numbers (cable box)

Manufacturer	Code number
Hamlin / Regal	222, 223, 224, 225, 226
Jerrold / G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

Manufacturer code numbers (DBS receiver)

Manufacturer	Code number
Sony	801 (preset code for the supplied remote control)
RCA	802

Notes

- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this remote control and you may not be able to operate your equipment with the supplied remote control. In this case, use the equipment's own remote control unit.
- Whenever you remove the batteries — to replace them, for example — if too much time is taken, the code numbers may revert to the factory setting and must be reset.

Troubleshooting

If the problem persists after trying the methods below, contact your nearest Sony dealer.

No picture (screen not lit), no sound
- ➡ Make sure the power cord is connected securely.
- ➡ Operate with the buttons on the projection TV.
- ➡ Insert the batteries in the remote control with the correct polarity.
- ➡ Replace the batteries with new ones if they are weak.
- ➡ Check to see if the TV / VIDEO setting is correct: when watching TV, set to TV, and when watching video tapes, set to VIDEO1, 2, or 3.
- ➡ Try another channel. It could be station trouble.
- ➡ Perform AUTO SET UP again using the SETUP button to return to the factory preset condition. (page 14)

Poor or no picture (screen lit), good sound
- ➡ Adjust PICTURE in the VIDEO menu. (page 23)
- ➡ Adjust BRIGHTNESS in the VIDEO menu. (page 23)
- ➡ Adjust convergence. (page 16)
- ➡ Check antenna / cable connections. (page 6)
- ➡ Perform AUTO SET UP again using the SETUP button to return to the factory preset condition. (page 14)
- ➡ Remove objects from the front of the projection TV.

Good picture, no sound
- ➡ Press MUTING so that "MUTING" disappears from the screen. (page 19)
- ➡ Check the MTS setting in the AUDIO menu. (page 27)
- ➡ Make sure SPEAKER is set to ON in the AUDIO menu. (page 27)
- ➡ Perform AUTO SET UP again using the SETUP button to return to the factory preset condition. (page 14)

No color
- ➡ Adjust the COLOR in the VIDEO menu. (page 23)
- ➡ Confirm that black and white program is not being broadcast.
- ➡ Perform AUTO SET UP again using the SETUP button to return to the factory preset condition. (page 14)

Only snow and noise appear on the screen
- ➡ Check the CABLE setting in the SET UP menu. (page 17)
- ➡ Check the antenna / cable connections. (page 6)
- ➡ Make sure the channel is broadcasting programs.
- ➡ Press ANT to change the input mode. (page 20)

Dotted lines or stripes
- ➡ Adjust the antenna.
- ➡ Move the projection TV away from noise sources such as cars, neon signs, and hair-dryers.

Double images or ghosts
- ➡ Use a highly directional outdoor antenna or a cable (when the problem is caused by reflections from nearby mountains or tall buildings).

Cannot operate menu
- ➡ If the item you want to choose appears in gray, you cannot select it. Press TV / VIDEO correctly.
- ➡ Check the CABLE setting in the SET UP menu. (page 17)

Cannot receive upper channels (UHF) when using an antenna
- ➡ Make sure CABLE is OFF in the SET UP menu. (page 17)
- ➡ Use AUTO PROGRAM to add receivable channels that are not presently in projection TV memory. (pages 14, 18)

Cannot receive any channels when using cable TV
- ➡ Make sure CABLE is ON in the SET UP menu. (page 17)
- ➡ Use AUTO PROGRAM to add receivable channels that are not presently in projection TV memory. (pages 14, 18)

Remote control does not operate
- ➡ Batteries could be weak. Replace the batteries. (page 13)
- ➡ Make sure the projection TV's power cord is connected securely to the wall outlet.
- ➡ Press TV (FUNCTION) when operating your projection TV.
- ➡ Are fluorescent lights too close to the projection TV? Move them at least 3-4 feet away from the projection TV.

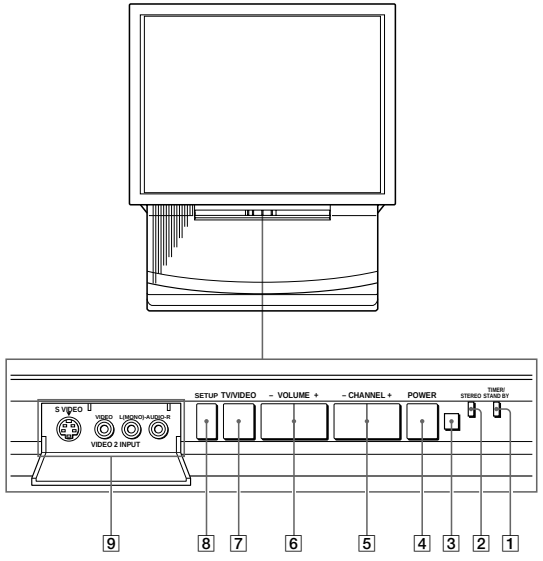
Cannot gain enough volume when using a cable box
- ➡ Increase the volume at the cable box. Then press TV (FUNCTION) and adjust the projection TV's volume.

The projection TV needs to be cleaned
- ➡ Clean the projection TV with a soft dry cloth. Never use strong solvents such as thinner or benzine, which might damage the finish of the cabinet.

Index to parts and controls

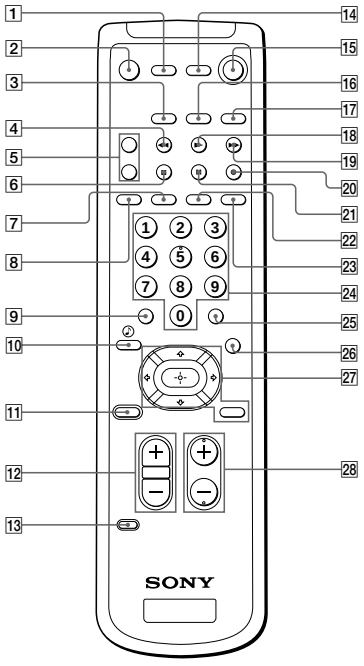
This section briefly describes the buttons and controls on the projection TV and on the Remote control. For more information, refer to the pages next to each description.

Projection TV — Front



1 TIMER / STANDBY indicator (pages 19, 30)
2 STEREO indicator (page 27)
3 Remote sensor
4 POWER switch (page 14)
5 CHANNEL + / – buttons (page 14)
6 VOLUME + / – buttons (page 14)
7 TV / VIDEO button (page 14, 15)
8 SETUP button (page 14)
9 S VIDEO / VIDEO 2 INPUT (VIDEO / AUDIO L(MONO) / R) jacks (page 10)

Remote control

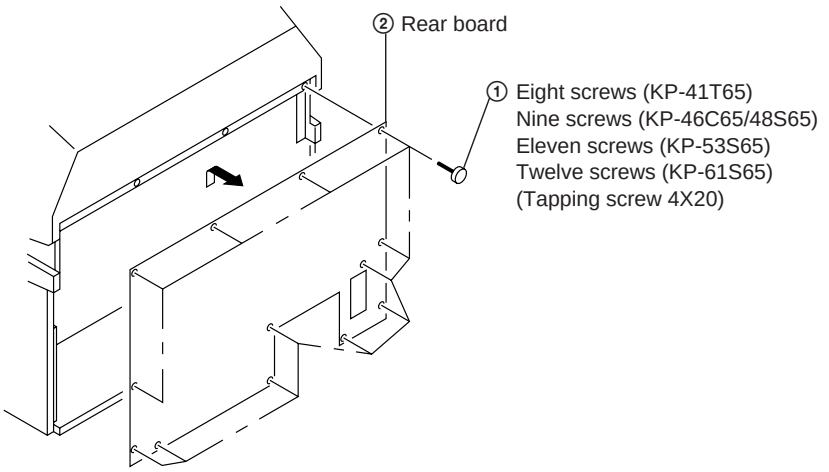


EN

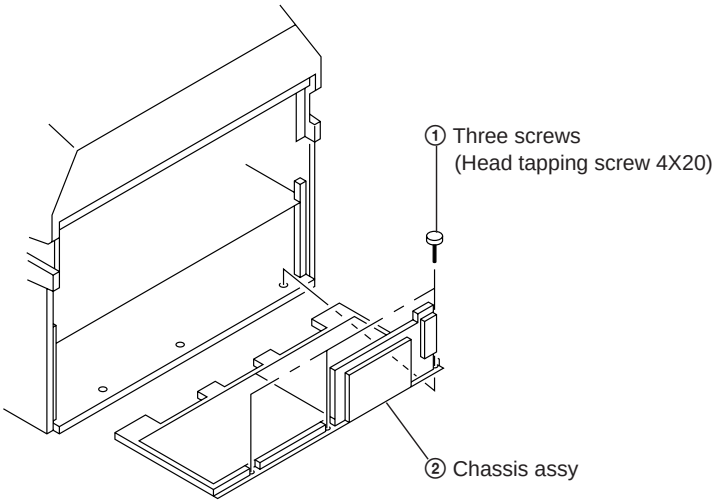
1 VTR (POWER) switch (page 36)
2 MUTING button (page 19)
3 VTR (FUNCTION) button (page 35)
4 FREEZE button (page 22)
5 TV / VTR CH + / – buttons (Yellow labelled button) (page 21)
6 POSITION button (page 22)
7 DISPLAY button (page 20)
8 SLEEP button (page 20)
9 JUMP button (page 19)
10 TV / DBS button (page 26, 37)
11 RESET button (page 23)
12 VOL (volume) + / – buttons (page 19)
13 CODE SET button (page 35)
14 DBS / CABLE (POWER) switch (page 37)
15 TV (POWER) switch (page 19)
16 DBS / CABLE (FUNCTION) button (page 37)
17 TV (FUNCTION) button (pages 15, 19)
18 SWAP button (page 22)
19 PIP button (page 21)
20 TV / VIDEO button (yellow labelled button) (page 21)
21 AUDIO button (page 21)
22 TV / VIDEO button (page 20)
23 ANT button (page 20)
24 0 – 9 buttons (page 16)
25 ENTER button (page 16)
26 MTS / GUIDE button (page 27, 37)
27 Menu operation buttons (page 15)
MENU button
↑ / ← / ↓ / → / buttons
button
28 CH (channel) + / – buttons (pages 16, 19)

SECTION 2
DISASSEMBLY

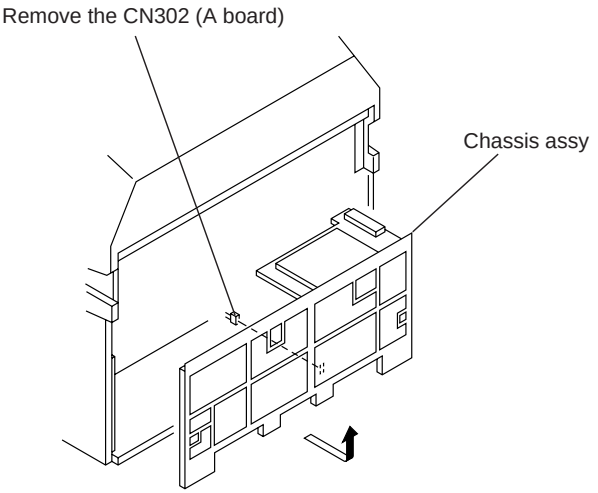
2-1. REAR BOARD REMOVAL



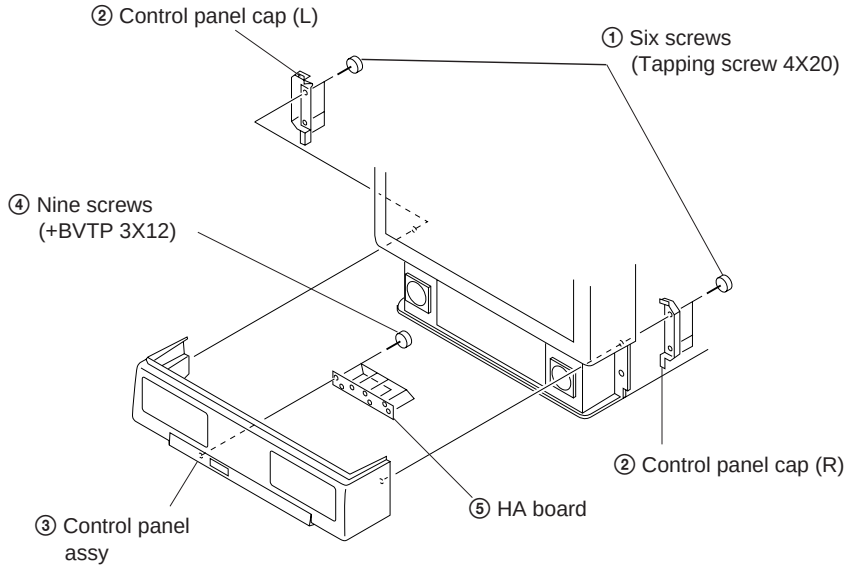
2-2. CHASSIS ASSY REMOVAL



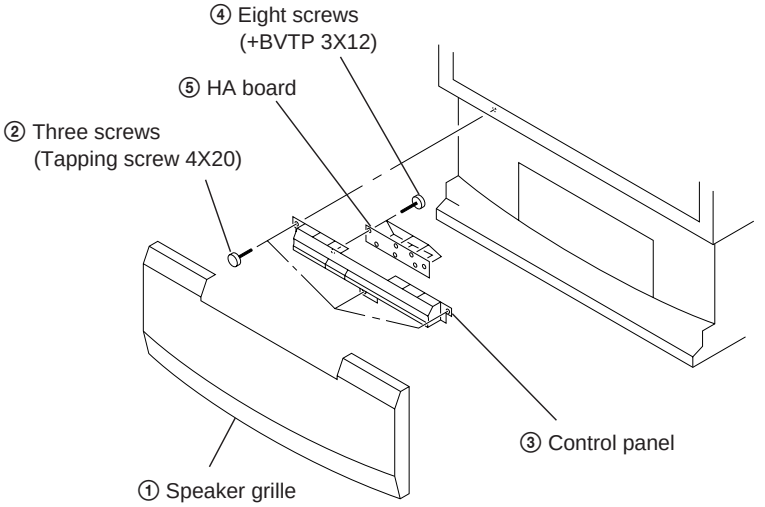
2-3. SERVICE POSITION



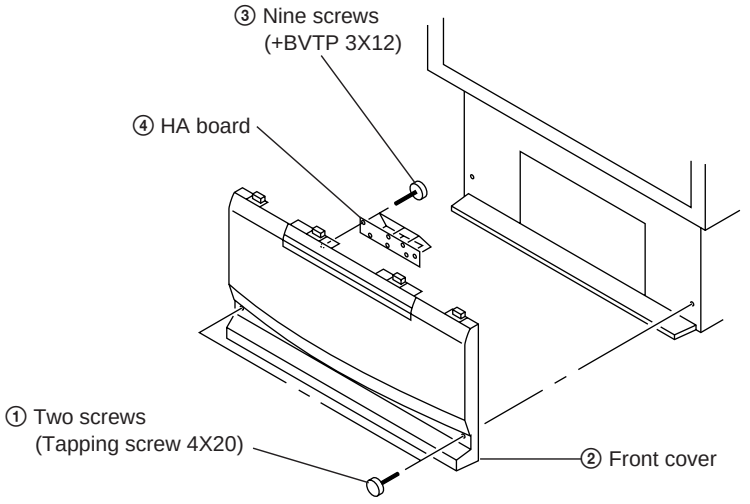
2-4-1. HA BOARD REMOVAL (KP-41T65)



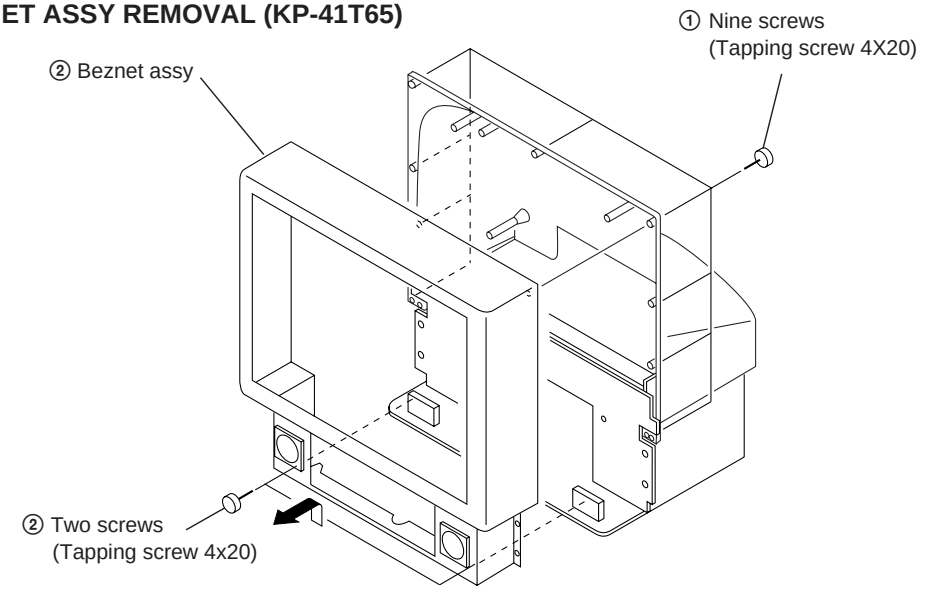
2-4-2. HA BOARD REMOVAL (KP-46C65)



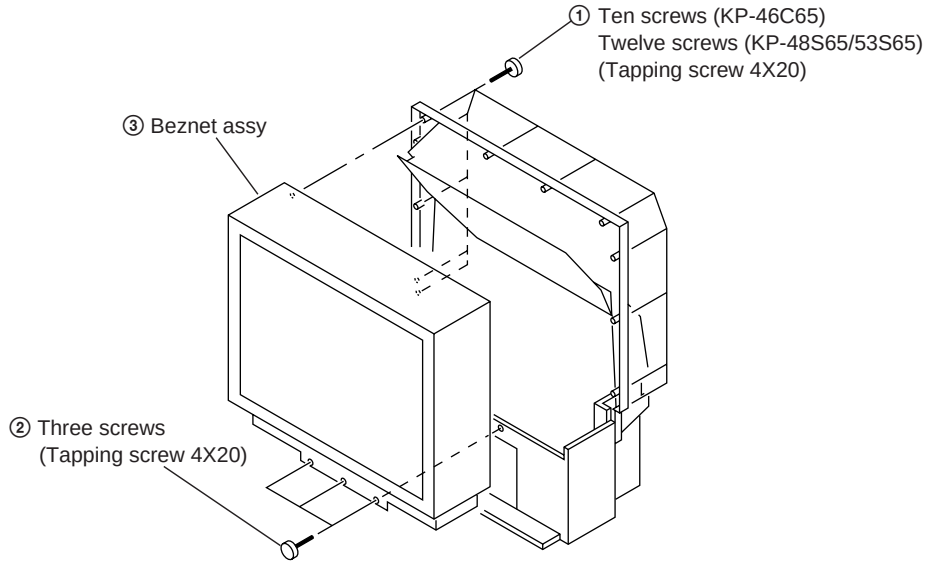
2-4-3. HA BOARD REMOVAL (KP-48S65/53S65/61S65)



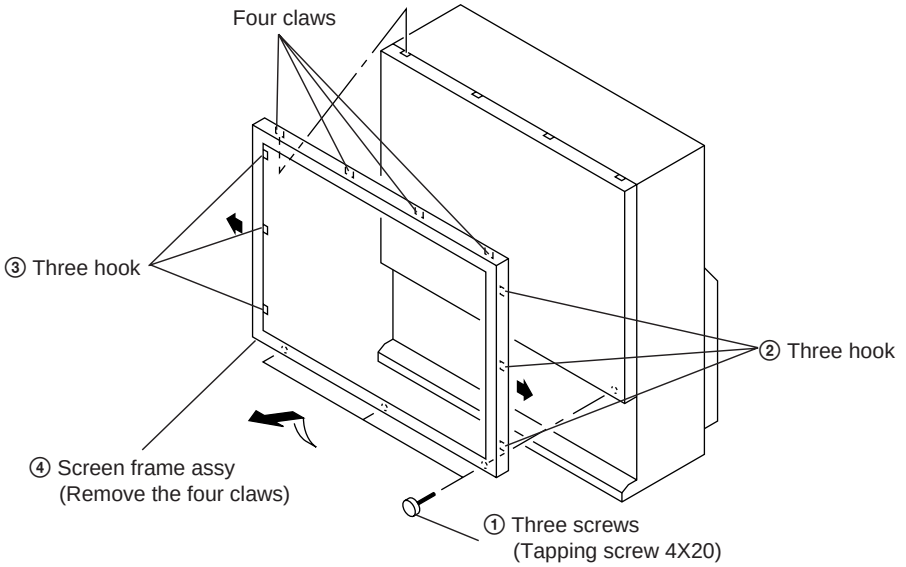
2-5-1. BEZNET ASSY REMOVAL (KP-41T65)



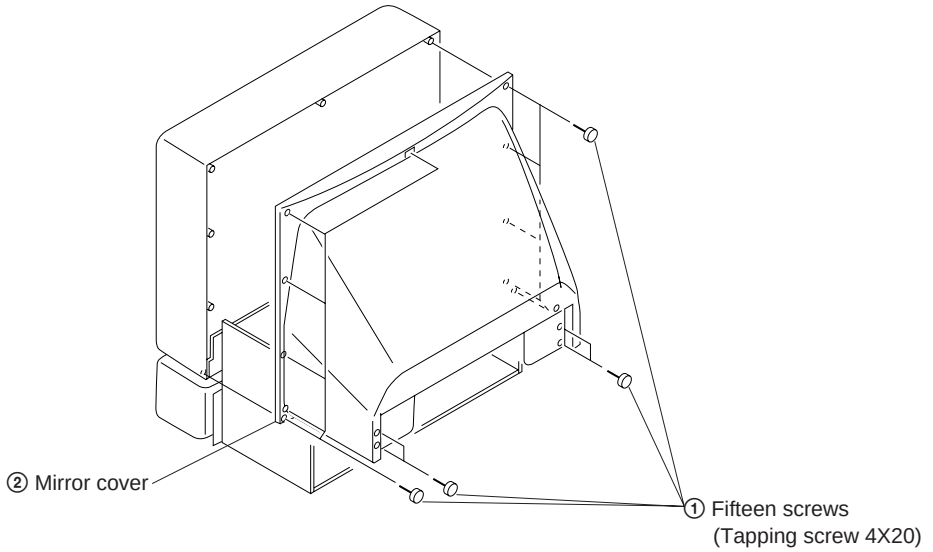
2-5-2. BEZNET ASSY REMOVAL (KP-46C65/48S65/53S65)



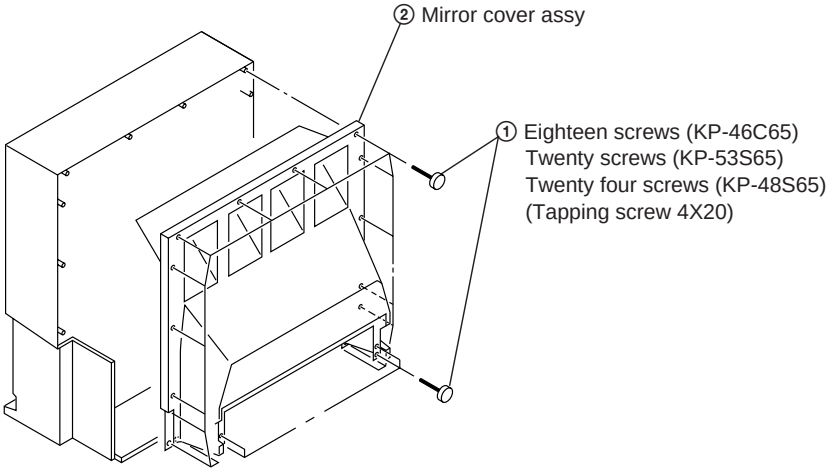
2-5-3. SCREEN FRAME ASSY REMOVAL (KP-61S65)



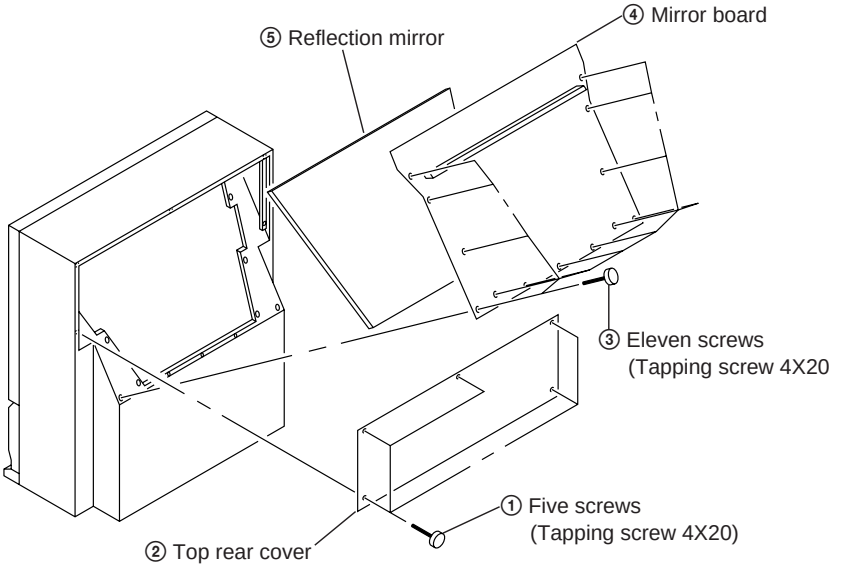
2-6-1. MIRROR COVER ASSY REMOVAL (KP-41T65)



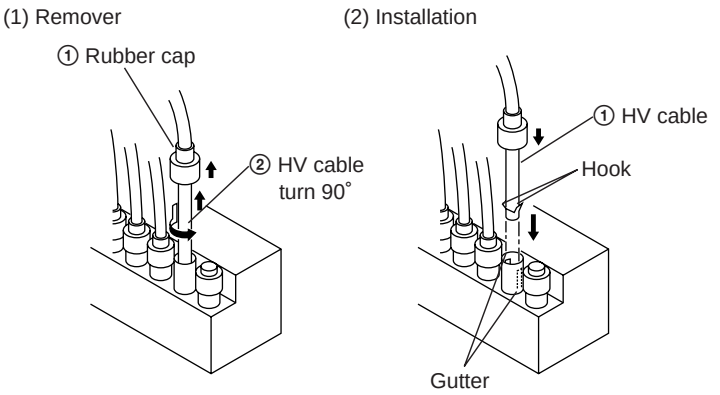
2-6-2. MIRROR COVER ASSY REMOVAL (KP-46C65/48S65/53S65)



2-6-3. REFLECTION MIRROR REMOVAL (KP-61S65)

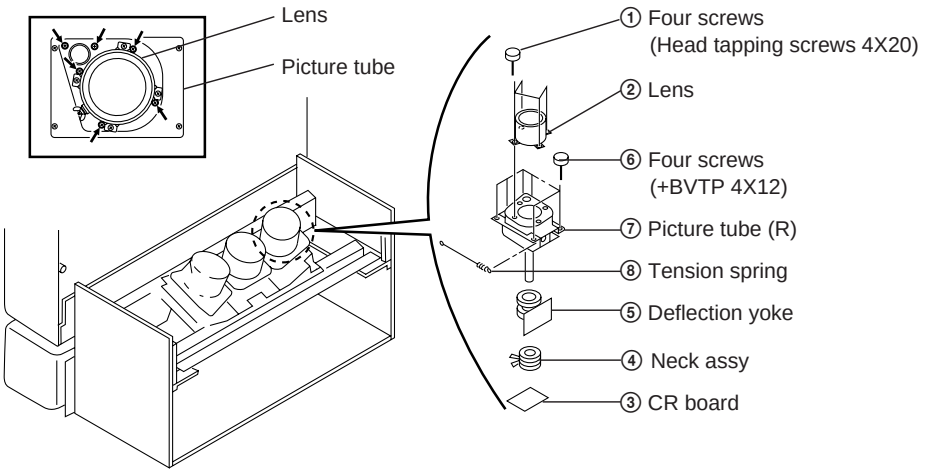


2-7. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL



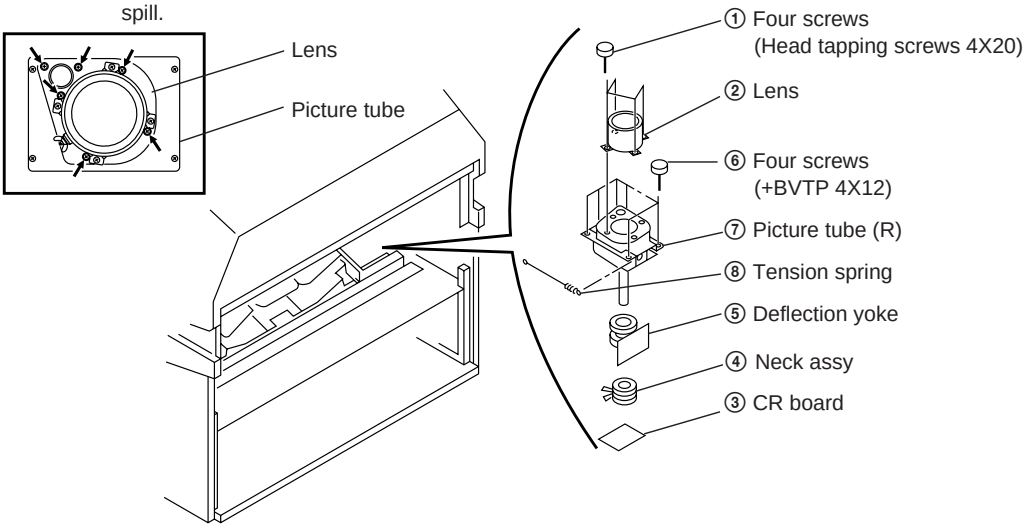
2-8-1. PICTURE TUBE REMOVAL (KP-41T65)

CAUTION: Removing the arrow-marked screws is strictly prohibited.
If removed, it may cause liquid spill.



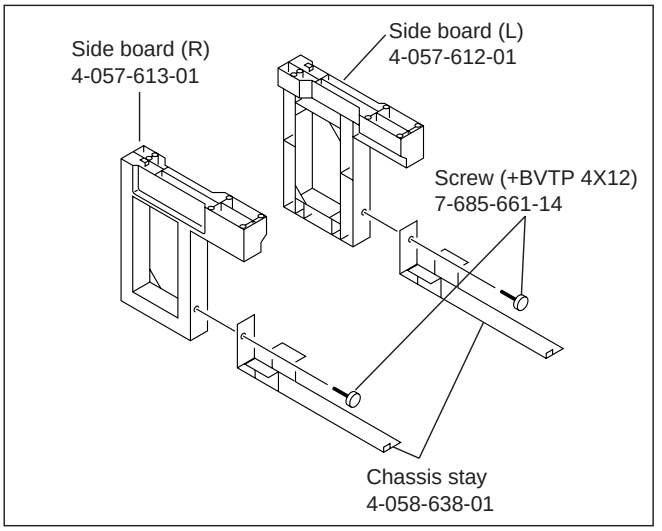
2-8-2. PICTURE TUBE REMOVAL (KP-41C65/48S65/53S65/61S65)

CAUTION: Removing the arrow-marked screws is strictly inhibited.
If removed, it may cause liquid spill.

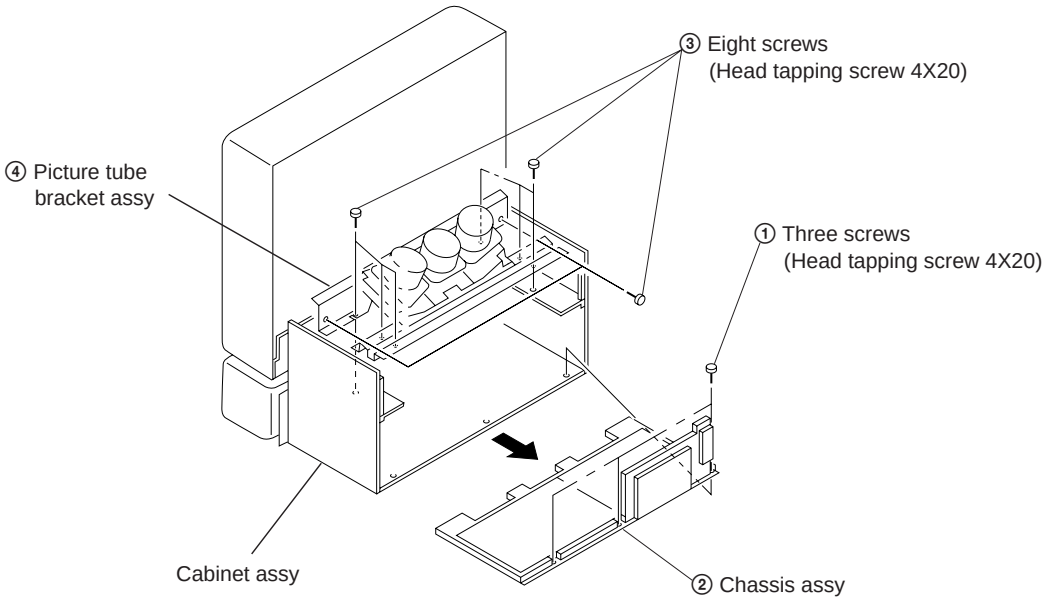


2-9-1. SERVICE STAY ASSY HOW TO USE AND CARRY BACK SERVICE STAY ASSY.

SERVICE STAY ASSY X-3702-036-1



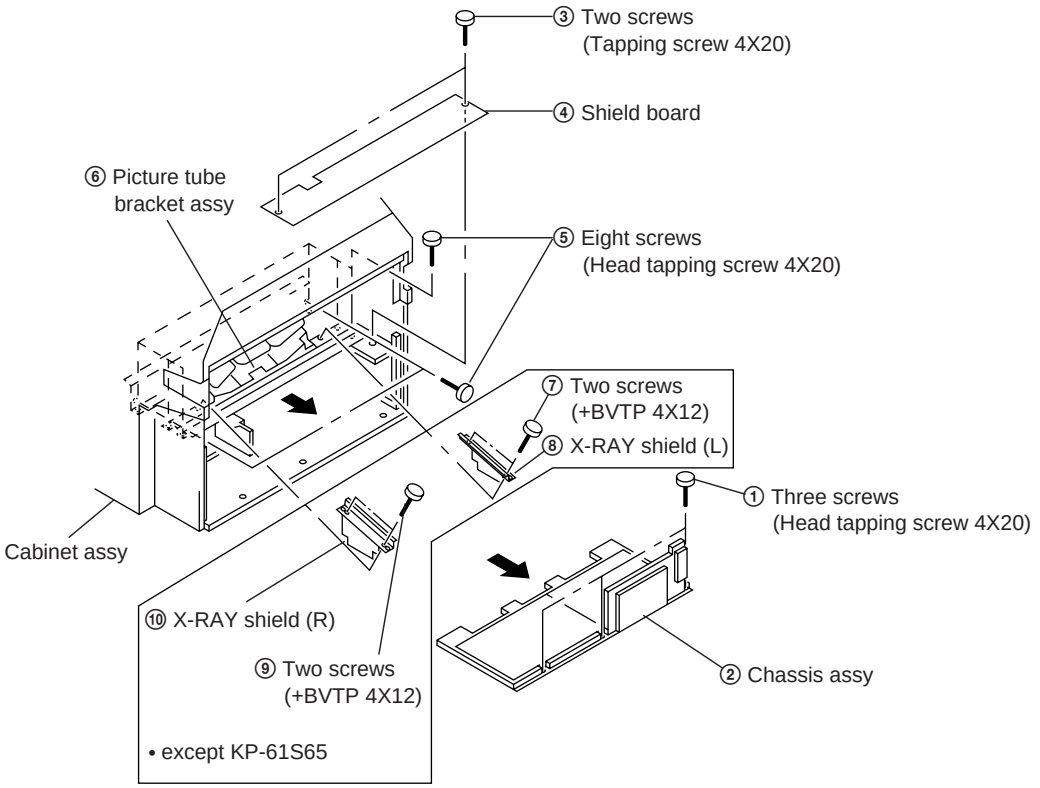
2-9-2. PICTURE TUBE BRACKET ASSY REMOVAL (KP-41T65)



1) Remove ① three screws (head tapping screw 4X20) and pull out ② chassis assy from cabinet assy.
2) Remove ③ eight screws (head tapping screw 4X20) and release ④ picture tube bracket assy from cabinet assy.

2-9-3. PICTURE TUBE BRACKET ASSY REMOVAL (KP-46C65/48S65/53S65/61S65)

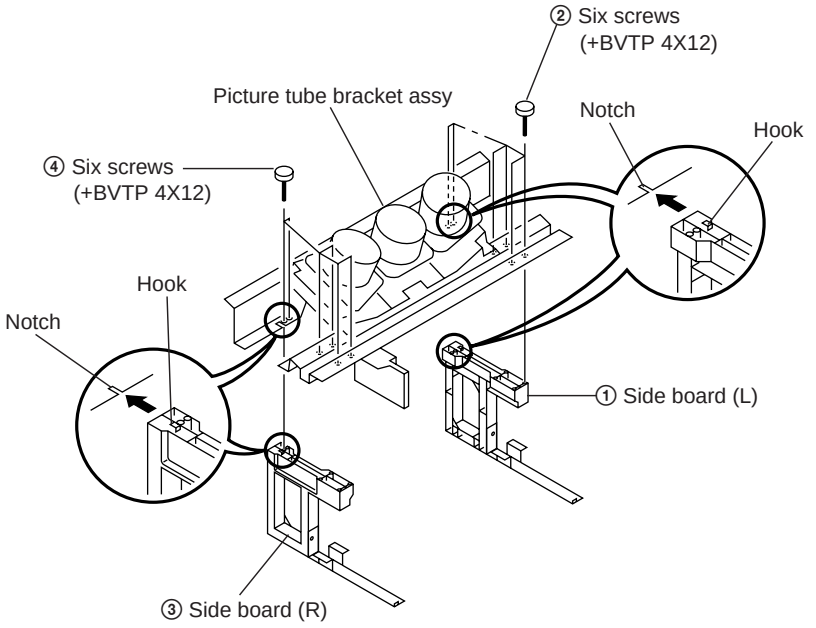
- **Disassemble HA board and speaker cord.**
- **Disassemble all the harness from purse lock.**



1) Remove ① three screws (head tapping screw 4X20) and pull out ② chassis assy from cabinet assy.
2) Remove ③ two screws (tapping screw 4X20) and remove ④ shield board.
3) Remove ⑤ eight screws (head tapping screw 4X20) and release ⑥ picture tube bracket assy from cabinet assy.

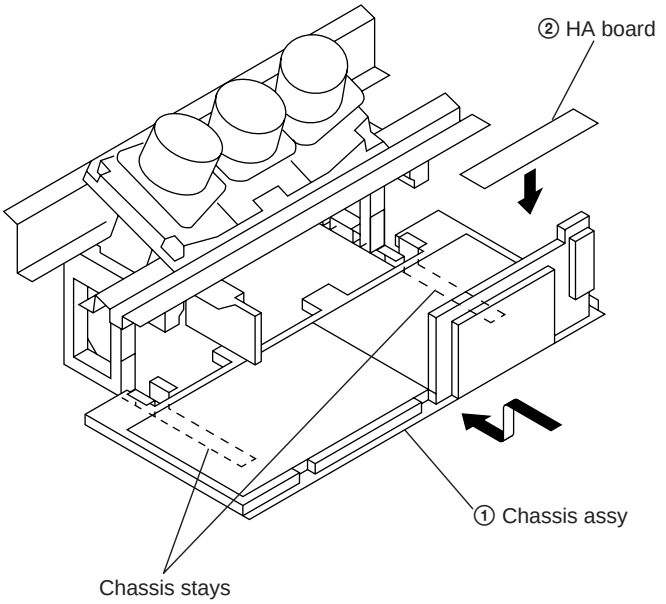
4) Remove ⑦ two screws (+BVTP 4X12) and remove ⑧ X-RAY shield (L).
5) Remove ⑨ two screws (+BVTP 4X12) and remove ⑩ X-RAY shield (R).
• except KP-61S65

2-9-4. SETTING OF SERVICE STAY ASSY. (KP-41T65/46C65/48S65/53S65)



1) Lift up picture tube bracket assy and fit the hook of ① side board (L) to the notch on the assy. Then fix then with ② six screws (+BVTP 4X12).
2) Lift up picture tube bracket assy and fit the hook of ③ side board (R) to the notch on the assy. Then fix then with ④ six screws (+BVTP 4X12).

2-9-5. INSTALL A CHASSIS ASSY

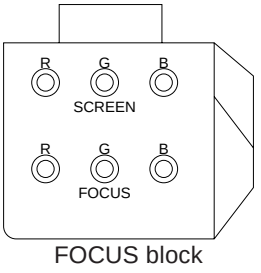


1) Put ① chassis assy on chassis stays.
2) Put ② HA board on ① chassis assy.
3) Put HV bracket on ① chassis assy. (KP-41T65 only)
4) You can carry the chassis assy in this condition.

SECTION 3
SET-UP ADJUSTMENTS

3-1. SCREEN VOLTAGE ADJUSTMENT (ROUGH ALIGNMENT)

1. Receive the Monoscope signal.
2. Set 50% BRIGHTNESS and minimum PICTURE.
3. Turn the red VR on the FOCUS block all the way to the left and then gradually turn it to the right until the point where you can see the retrace line.
4. Next gradually turn it to the left to the position where the retrace line disappears.



FOCUS block

Fig. 3-1

3-2. FOCUS LENS ADJUSTMENT

1. Loose the lens screw.
2. Set in service mode.
3. Use VP on the service mode menu to shown only the green color.
4. Press the Commander Menu button and select FEATURES and CONVERGENCE to display the test signal (crosshatch) on the screen.
5. Rotate the green lens and align with the optimal focus point from the test signal.
6. Use RG-RH from the service mode menu to set to green and red.
7. Output the test signal and rotate the red lens to obtain the optimum focus at the point where the red and green spots overlap.
8. Use RG-BH from the service mode menu to set to red and blue.
9. Output the test signal and rotate the blue lens to obtain the optimum focus at the point where the blue and red spots overlap.
10. Tighten the lens screw.

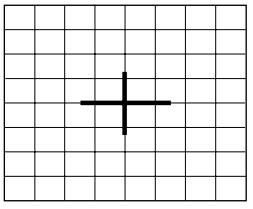

Test signal

Fig. 3-2

3-3. SCREEN (G2) ADJUSTMENT

1. Select VIDEO mode without signals.
2. Connect an oscilloscope to the TP701(KR), TP731(KG) and TP761(KB) of CR board, CG board and CB board.
3. Adjust R, G and B screen voltage to 170 – 173V with screen VR on the focusblock.

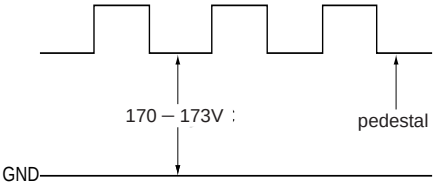


Fig. 3-3

3-4. FOCUS VR ADJUSTMENT

1. Set in service mode.
2. Use VP on the service mode menu to shown only the green color.
3. Press the Commander Menu button (convergence) and output the test signal (crosshach).
4. Rotate the green VR on the FOCUS block and align to obtain the optimal focus point.
5. Use RG-RH from the service mode menu to set to green and red.
6. Output the test signal and rotate the red VR to obtain the optimum focus at the point where the red and green spots overlap.
7. Use RG-BH from the service mode menu to set to red and blue.
8. Output the test signal and rotate the blue VR aligning to obtain the optimum focus at the point where the blue and green spots overlap.

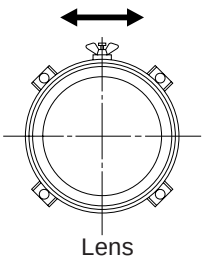

Lens

Fig. 3-4

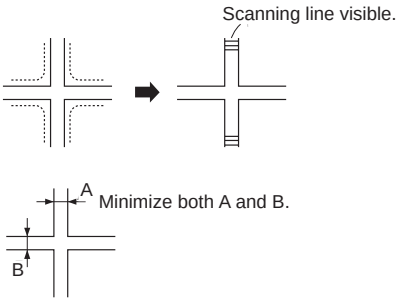


Fig. 3-5

3-5. DEFLECTION YOKE TILT ADJUSTMENT

1. Set to receive the Monoscope signal.
2. Set in service mode.
3. Use VP on the service mode menu to show only the green color.
4. Loosen the deflection yoke set screw and align the tilt of the Deflection Yoke so that the bars at the center of the monoscope pattern are horizontal.
5. After aligning the deflection yoke, fasten it securely to the funnel-shaped portion (neck) of the CRT.
6. The tilt of the deflection yoke for red is aligned with RG-RH on the service mode menu, and the tilt on the deflection yoke for biue is aligned with RG-BH on the service menu, is aligned the same as was done for green.

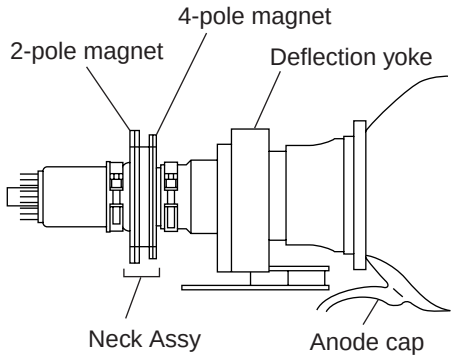


Fig. 3-6

3-6. 2-POLE MAGNET ADJUSTMENT

1. Set in service mode.
2. Set to receive the Dot signal.
3. Place the caps on the red and blue lens so that only the green color is shown.
4. Turn the green VR on the focus block to the right and set to overfocus to enlarge the spot.
5. Now align the 2-Pole Magnet so that the enlarged spot is in the center of the Just Focus spot.
6. Align the green focus VR and set for just (precise) focus.
7. Perform the same alignment for red and blue.

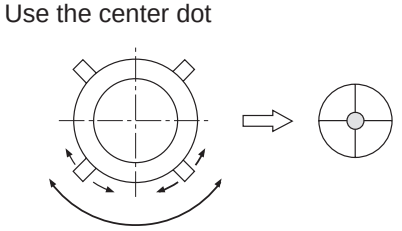


Fig. 3-7

3-7. 4-POLE MAGNET ADJUSTMENT

1. Set in service mode.
2. Set to receive the Dot signal.
3. Remove CN302 connector for A board
4. Place the caps on the red and blue lens so that only the green color is shown.
5. Turn the green VR on the focus block to the left and set to underfocus to enlarge the spot.
6. Now align the 4-Pole Magnet so that the enlarged spot becomes a perfect circle.
7. Perform the same alignment for red and blue.

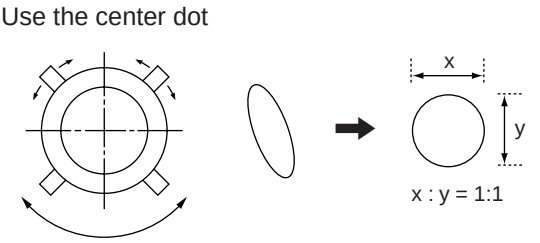


Fig. 3-8

3-8. DEFOCUS ADJUSTMENT (Blue)

1. Receive the crosshatch signal
2. Adjust the FOCUS knob so that the crosshatch pattern vertical line width is as in the figure on the right.
3. Blue only defocus Adjustment.

[Focus adjustment point]

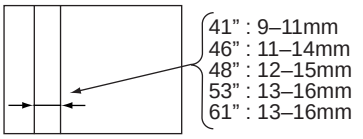


Fig. 3-9

3-9. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

By using Remote Commander (RM-Y136A),all circuit adjustments can be made.

NOTE : Test Equipment Required.

1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio oscillator

1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

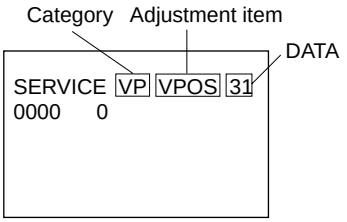
SERVICE MODE PROCEDURE

1. Standby mode. (Power off)
2. DISPLAY → 5 → VOL (+) → TV POWER

   (+ → 5 → ◿ → ▢)

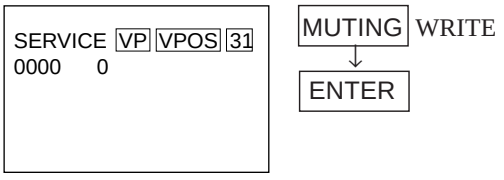
   on the Remote Commander.
   (Press each button within a second.)

SERVICE MODE ADJUSTMENT



3. The CRT displays the item being adjusted.
4. Press 1 or 4 on the Remote Commander to select the item.
5. Press 3 or 6 on the Remote Commander to change the data.
6. Press 2 or 5 on the Remote Commander to select the category.
7. If you want to recover the latest values press 7 then ENTER to read the memory.
8. Press MUTING then ENTER to write into memory.

SERVICE MODE ADJUSTMENT

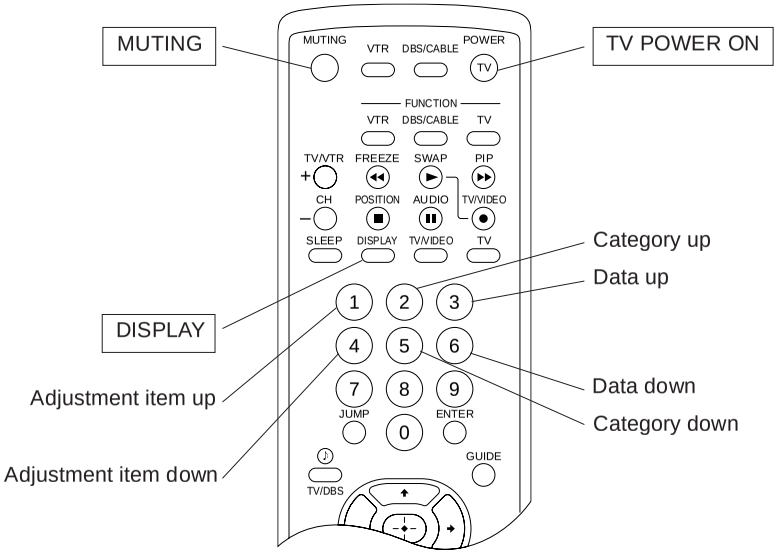


8. Press 8 then ENTER on the Remote Commander to initialize.
9. Turn set off and on to exit.

2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, remove the plug from AC outlet, and then replace the plug in AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again and confirm they were adjusted.

3. ADJUST BUTTONS AND INDICATOR



RM-Y136A

4. SERVICE MODE LIST

VP

Category	Adjustment item	Standard data	Data range	Note
VP	VPOS		0-63	V SHIFT
	VSIZ		0-63	V SIZE
	VCOM	0	0-3	HV-COMP-V
	VLIN	7	0-15	V LIN
	VSCO	7	0-15	S CORRECTION
	HPOS	7	0-15	H SHIFT
	HSIZ		0-63	H SIZE
	PAMP		0-63	PIN AMP
	UPIN	7	0-15	UPPER CORNER PIN
	LPIN	7	0-15	LOWER CORNER PIN
	PPHA	7	0-15	H TRAPEZOID
	AFC	2	0-3	AFC LOOP GAIN
	VBOW	7	0-15	V BOW
	VANG	7	0-15	V ANGLE
	REF	3	0-3	AKB REFERENCE
	GDRV		0-63	GREEN DRIVE
	BDRV		0-63	BLUE DRIVE
	GCUT		0-15	GREEN CUT OFF
	BCUT		0-15	BLUE CUT OFF
	SCON		0-15	SUB CONTRAST
	SHUE		0-15	SUB HUE
	SCOL		0-15	SUB COLOR
	SBRT		0-63	SUB BRIGHTNESS
	SSHP	7	0-15	SUB SHARPNESS
	GMMA	0	0-3	GAMMA LEVEL
	CDM2	0	0,1	COUNT DOWN MODE 2
	DPIX	1	0,1	DYNAMIC PICTURE
	Y-DC	1	0,1	DC TRANSMISSION RATIO
	ABLM	1	0,1	ABL MODE
	AXIS	0	0,1	R-Y, G-Y AXIS
	NOTC	0	0,1	C TRAP
	CROM	7	0-15	C TRAP F0
	TOT	0	0,1	C TOT FILTER
	PREL	3	0-3	PRE/OVER LEVEL
	SHPF	2	0-3	SHARPNESS F0
	RON		0,1	RED ON/OFF
	GON		0,1	GREEN ON/OFF
	BON		0,1	BLUE ON/OFF
	DCOL		0,1	DYNAMIC COLOR
	CDMD	0	0,1	V COUNT DOWN
	LBLK	13	0-15	H BLK WIDTH LEFT SIDE
	RBLK	13	0-15	H BLK WIDTH RIGHT SIDE

AP

Category	Adjustment item	Standard data		Data range	Note
		41T	V		
AP	SVOL	0	0	0-15	SUB VOLUME
	SBAL	7	7	0-15	SUB BLANCE
	SBAS	9	7	0-15	SUB BASS
	STRE	6	7	0-15	SUB TREBLE

RG

Category	Adjustment item	Standard data	Data range	Note
RG	GH CENT		–127- +127	GREEN H SENT
	GH SKEW		–127-+127	GREEN H SKEW
	GH BOW		–127-+127	GREEN H BOW
	GH 4BOW		–127-+127	GREEN H 4TH BOW
	GH SIZE		–127-+127	GREEN H SIZE
	GH LIN		–127-+127	GREEN H LINEARITY
	GH MSIZ		–127-+127	GREEN H MID SIZE
	GH MLIN		–127-+127	GREEN H MID LINEARITY
	GH KEY		–127-+127	GREEN H KEY
	GH SSKW		–127-+127	GREEN H SUB SKEW
	GH MPIN		–127-+127	GREEN H MID PIN
	GH PIN		–127-+127	GREEN H PIN
	GH SBOW		–127-+127	GREEN H SUB BOW
	GH MBOW		–127-+127	GREEN H MID BOW
	GH 4PIN		–127-+127	GREEN H 4TH PIN
	GH 4SBO		–127-+127	GREEN H 4TH SUB BOW
	GV CENT		–127-+127	GREEN V CENT
	GV SKEW		–127-+127	GREEN V SKEW
	GV BOW		–127-+127	GREEN V BOW
	GV SIZE		–127-+127	GREEN V SIZE
	GV LIN		–127-+127	GREEN V LINEARITY
	GV MSIZ		–127-+127	GREEN V MID SIZE
	GV MKEY		–127-+127	GREEN V MID KEY
	GV KEY		–127-+127	GREEN V KEY
	GV SSKW		–127-+127	GREEN V SUB SKEW
	GV MPIN		–127-+127	GREEN V MID PIN
	GV PIN		–127-+127	GREEN V PIN
	GV SBOW		–127-+127	GREEN V SUB BOW
	GV WAVE		–127-+127	GREEN V WAVE
	GV 4PIN		–127-+127	GREEN V 4TH PIN
	RH CENT		–95-+96	RED H CENT
	RH SKEW		–127-+127	RED H SKEW
	RH BOW		–127-+127	RED H BOW
	RH 4BOW		–127-+127	RED H 4TH BOW
	RH SIZE		–127-+127	RED H SIZE
	RH LIN		–127-+127	RED H LINEARITY
	RH MSIZ		–127-+127	RED H MID SIZE
	RH MLIN		–127-+127	RED H MID LINEARITY
	RH KEY		–127-+127	RED H KEY
	RH SSKW		–127-+127	RED H SUB SKEW
	RH MPIN		–127-+127	RED H MID PIN
	RH PIN		–127-+127	RED H PIN
	RH SBOW		–127-+127	RED H SUB BOW
	RH MBOW		–127-+127	RED H MID BOW
	RH 4PIN		–127-+127	RED H 4TH PIN
	RH 4SBO		–127-+127	RED H 4TH SUB BOW
	RV CENT		–95-+96	RED V CEVT
	RV SKEW		–127-+127	RED V SKEW
	RV BOW		–127-+127	RED V BOW
	RV SIZE		–127-+127	RED V SIZE
	RV LIN		–127-+127	RED V LINEARITY
	RV MSIZ		–127-+127	RED V MID SIZE
	RV MKEY		–127-+127	RED V MID KEY
	RV KEY		–127-+127	RED V KEY
	RV SSKW		–127-+127	RED V SUB SKEW
	RV MPIN		–127-+127	RED V MID PIN
	RV PIN		–127-+127	RED V PIN
	RV SBOW		–127-+127	RED V SUB BOW
	RV WAVE		–127-+127	RED V WAVE
	RV 4PIN		–127-+127	RED V 4TH PIN
	RV WING		–31-+32	RED V WING
	BH CENT		–95-+96	BLUE H CENT
	BH SKEW		–127-+127	BLUE H SKEW
	BH BOW		–127-+127	BLUE H BOW
	BH 4BOW		–127-+127	BLUE H 4TH BOW
	BH SIZE		–127-+127	BLUE H SIZE
	BH LIN		–127-+127	BLUE H LINEARITY
	BH MSIZ		–127-+127	BLUE H MID SIZE
	BH MLIN		–127-+127	BLUE H MID LINEARITY
	BH KEY		–127-+127	BLUE H KEY
	BH SSKW		–127-+127	BLUE H SUB SKEW
	BH MPIN		–127-+127	BLUE H MID PIN
	BH PIN		–127-+127	BLUE H PIN
	BH SBOW		–127-+127	BLUE H SUB BOW
	BH MBOW		–127-+127	BLUE H MID BOW

Category	Adjustment item	Standard data	Data range	Note
RG	BH 4PIN		–127-+127	BLUE H 4TH PIN
	BH 4SBO		–127-+127	BLUE H 4TH SUB BOW
	BV CENT		–95-+96	BLUE V CENT
	BV SKEW		–127-+127	BLUE V SKEW
	BV BOW		–127-+127	BLUE V BOW
	BV SIZE		–127-+127	BLUE V SIZE
	BV LIN		–127-+127	BLUE V LINEARITY
	BV MSIZ		–127-+127	BLUE V MID SIZE
	BV MKEY		–127-+127	BLUE V MID KEY
	BV KEY		–127-+127	BLUE V KEY
	BV SSKW		–127-+127	BLUE V SUB SKEW
	BV MPIN		–127-+127	BLUE V MID PIN
	BV PIN		–127-+127	BLUE V PIN
	BV SBOW		–127-+127	BLUE V SUB BOW
	BV WAVE		–127-+127	BLUE V WAVE
	BV 4PIN		–127-+127	BLUE V 4TH PIN
	BV WING		–31-+32	BLUE V WING

CC

Category	Adjustment item	Standard data	Data range	Note
CC	CRIH	9	0-15	CRI COUNT HIGH
	CRIL	2	0-15	CRI COUNT LOW
	CFLD	5	0-15	FIXED FIELD COUNT
	CCDI	3	0-7	NO CCD INT COMPARE
	CRIP	4	0-7	CRI & PARITY ERROR
	CRIT	2	0-3	CRI TIME CONSTANT
	CSB1	3	0-3	SYNC SLICE BIAS 1
	CSB2	4	0-7	SYNC SLICE BIAS 2
	CCBD	4	0-15	C SYNC BACKPORCH DET
	CCFD	7	0-15	C SYNC FRONTPORCH DET
	CREP	142	0-255	CRI SIGNAL END POSITION
	CSEP	186	0-255	START BIT END POSITION
	CRBD	8	0-15	CRI BACKPORCH DET
	CRFD	9	0-15	CRI FRONTPORCH DET
	CSSD	3	0-15	STROBE WINDOW ST DLY
	CSED	9	0-15	STROBE WINDOW ED DLY
	CSBS	12	0-31	START BIT THRESHOLD
	CDSD	8	0-31	DATA START DELAY
	CCDS	9	0-31	CAPTION DT THRESHOLD
	CHMK	42	0-63	H SYNC MASK WIDTH
	CHSY	136	0-255	H SYNC VCO COUNT

OP

Category	Adjustment item	Standard data	Data range	Note
OP	DISP		0-63	OSD POSITION
	PDPS		0-255	FAV/IDX CH POSITION
	PDPO		0-7	CH POSITION (OFF SET)

ID

Category	Adjustment item	Standard data	Data range	Note
ID	ID0	25	0-255	MODEL ID#0
	ID1	55	0-255	MODEL ID#1
	ID2	31	0-255	MODEL ID#2
	ID3	1	0-255	MODEL ID#3
	ID4	155	0-255	MODEL ID#4
	ID5	177	0-255	MODEL ID#5
	ID6	198	0-255	MODEL ID#6
	ID7	66	0-255	MODEL ID#7

PP

Category	Adjustment item	Standard data	Data range	Note
PP	BGHP	-	0-15	PIP H POSITION
	BGVP	-	0-15	PIP V POSITION
	MAHP	-	0-15	P&P MAIN H AQUISITION
	MAVP	-	0-255	P&P MAIN V AQUISITION
	SAHP	-	0-15	P&P SUB H AQUISITION
	SAVP	-	0-255	P&P SUB V AQUISITION
	DECS	-	0-31	S DECODER REGISTERS
	DECM	-	0-31	M DECODER REGISTERS
	DIS	-	0-127	DISPLAY SETTING
	BSIZ	-	0-15	BORDER SIZE
	6BIT	-	0-3	6bit (SMART6/SKIP6)
	VPED	-	0-15	V OFFSET
	UPED	-	0-15	U OFFSET

PS

Category	Adjustment item	Standard data	Data range	Note
PS	PIPH		0-127	PIP H POSITION
	PIPV		0-63	PIP V POSITION
	PMVD	26	0-31	PIP V PULSE DELAY(M)
	PIVD	22	0-31	PIP V PULSE DELAY(I)
	PCON		0-15	PIP CONTRAST(I)

Category	Adjustment item	Standard data	Data range	Note
PS	FRMY	7	0-15	PIP FRAME Y LEVEL
	IPER	0	0-15	PIP PEDESTAL R-Y(I)
	IPEB	0	0-15	PIP PEDESTAL B-Y(I)
	IHUE		0-15	PIP SUB HUE
	ICOL		0-15	PIP SUB COLOR
	PHDL	1	0-15	PIP H PULSE DELAY
	PYSD	1	0-15	PIP SELECT DELAY
	PYDL	0	0-7	PIP Y DELAY
	PCPS	0	0,1	PIP CLP
	PCPF	0	0,1	PIP CLP CYCLES
	PSEL	0	0,1	PIP SELDOWN
	PPLL	0	0-3	PIP PLL
	CHRI	0	0,1	PIP INPUT POLARITY
	CHRO	0	0,1	PIP OUTPUT POLARITY

MC

Category	Adjustment item	Standard data	Data range	Note
MC	MSCN	-	0-15	P&P MAIN SUB CONTRAST
	MSHU	-	0-15	P&P MAIN SUB HUE
	MSCL	-	0-15	P&P MAIN SUB COLOR
	MUPD	-	0-15	P&P MAIN U OFFSET
	MVPD	-	0-15	P&P MAIN V OFFSET
	MDLY	-	0-3	P&P MAIN Y DELAY
	MBGR	-	0-3	P&P MAIN SCP CONTROL(1)
	MBGF	-	0-3	P&P MAIN SCP CONTROL(2)

IC

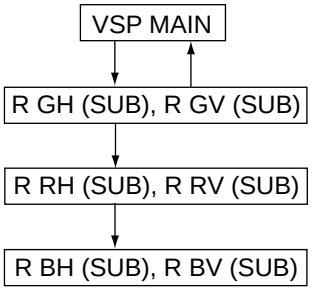
Category	Adjustment item	Standard data	Data range	Note
IC	SSCN	6	0-15	P&P SUB SUB CONTRAST
	SSHU	-	0-15	P&P SUB SUB HUE
	SSCL	-	0-15	P&P SUB SUB COLOR
	SUPD	-	0-15	P&P SUB U OFFSET
	SVPD	-	0-15	P&P SUB V OFFSET
	SDLY	0	0-3	P&P SUB Y DELAY
	SBGR	3	0-3	P&P SUB SCP CONTROL(1)
	SBGF	3	0-3	P&P SUB SCP CONTROL(2)
	PAFC	2	0-3	PIP AFC LOOP GAIN
	PTOT	0	0,1	PIP CHROMA TOT FILTER
	PYDR	10	0-31	PIP Y DRIVE
	PYDC	3	0-7	PIP DC TRAN

Category	Adjustment item	Standard data	Data range	Note
IC	PSHP	1	0,1	PIP SHARPNESS F0
	PDPI	0	0,1	PIP DYNAMIC PICTURE
	PSYS	0	0-3	PIP COLOR SYSTEM
	PXTL	0	0-3	PIP X' TAL
	PLOP	0	0-3	PIP COLOR LOOP

3-10. CONVERGENCE ADJUSTMENT

• When replacing the deflection yoke, always perform "DEFLECTION YOKE TILT ADJUSTMENT" before adjusting the convergence.

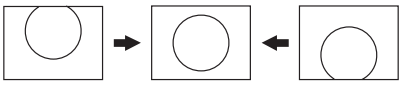
Adjustment procedure



[GREEN REGISTRATION ADJUSTMENT]

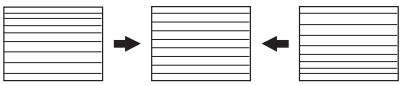
• V-SHIFT adjustment

VP VPOS



• V-LINEARITY adjustment

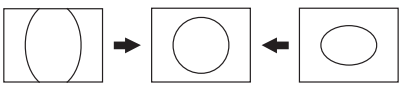
VP VLIN



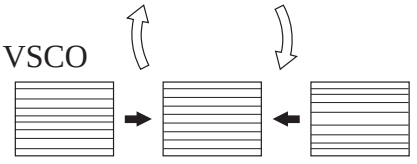
• V-SIZE, V-CORRECTION adjustment

While tracking, adjust so that the lattice intervals for VSIZ and VSCO are equal.

VP VSIZ

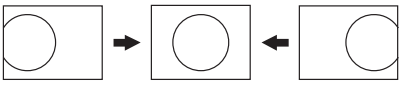


VP VSCO



• H-SHIFT adjustment

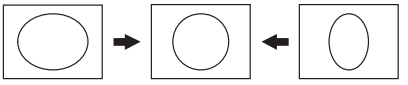
VP HPOS



• H-SIZE adjustment

Finely adjust with SUB MSIZ.

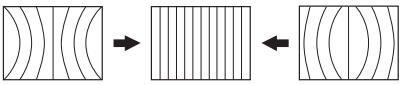
VP HSIZ



• PIN-AMP adjustment

Finely adjust with SUB MPIN.

VP PAMP

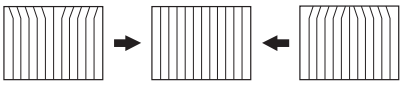


• UPPER/LOWER-CORNER PIN adjustment

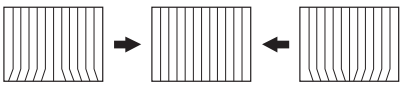
Correct the screens top and bottom bow line.
However, if this adjustment is overdone, distortion may occur with the PIN-AMP adjustment that can not be re-adjusted.

Note : The PIN-AMP adjusts the overall screen from top to bottom, but the UPPER/LOWER-CORNER PIN adjustments have large movement in the top and bottom sections, so be careful.

VP UPIN



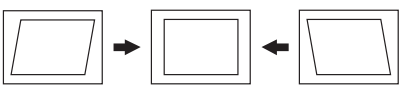
VP LPIN



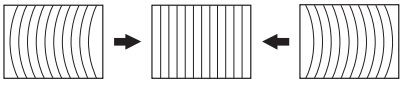
• V-ANGLE, V-BOW adjustment

Correct the tilt and bow of the vertical line at the center of the screen.

VP VANG



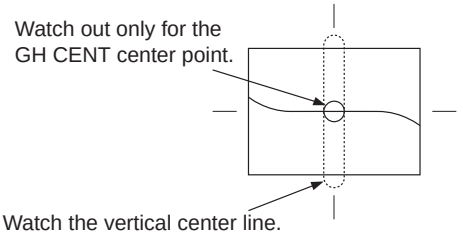
VP VBOW

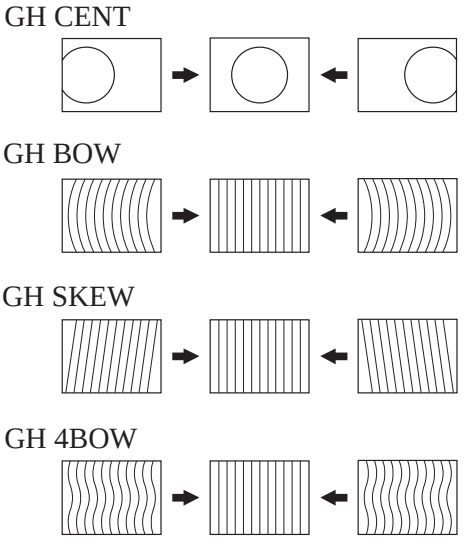


[GREEN SUB ADJUSTMENT]

SCREEN CENTER SECTION GREEN VERTICAL LINE ADJUSTMENT

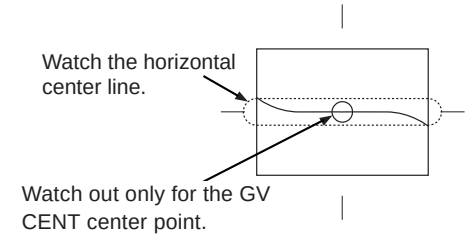
1. Finely adjust with GH CENT, GH BOW, GH SKEW. Adjust by watching out for the GH CENT screen center section.
2. RGH 4TH BOW adjustment
   Correct the corner distortion that could not be adjusted away with the GH 4BOW adjustment.

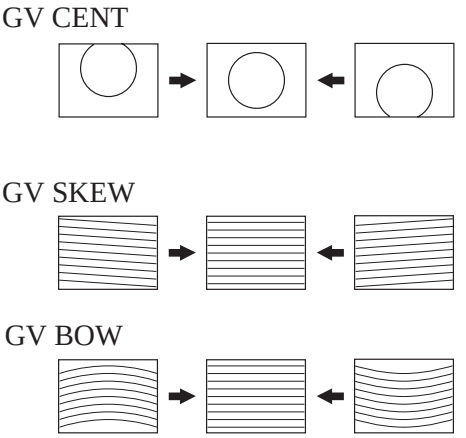




SCREEN CENTER SECTION GREEN HORIZONTAL LINE ADJUSTMENT

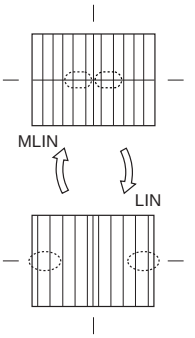
1. Finely adjust the center position of the vertical line at the center of the screen with GV CENT.
2. Correct the tilt and bow of the horizontal line at the center of the screen with GV SKEW and GV BOW.





GREEN SIZE AND LINEARITY ADJUSTMENT

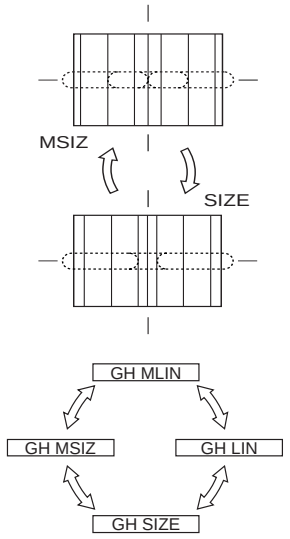
1. Balance the sizes at both sides of the center section of the screen with RGH MLIN.
2. Balance the sizes on both end sections of the screen with RGH LIN.
3. While tracking, adjust with RGH MLIN and RGH LIN so that the sizes of the horizontal line at the center of the screen are symmetrical left and right.



GREEN HORIZONTAL SIZE ADJUSTMENT

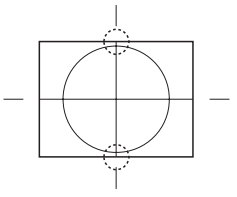
1. Adjust with RGH MSIZE so that the sizes of both ends and of both sides of the center section of the screen are equal.
2. Adjust with GH SIZE so that the horizontal sizes of both ends and of both sides of the center section of the screen are equal.
3. While tracking, adjust with GH MSIZ and GH SIZE so that the lattice intervals for the horizontal line section of the center section of the screen are equal and so that the horizontal size is the prescribed value.
4. If M LIN is changed when the GH MSIZ and GH SIZE adjustment is complete, adjust again while tracking.

• With just the H SIZE adjustment in MAIN, if there is no need to adjust RGH SIZE in SUB this can save power.



GREEN VERTICAL LINEARITY ADJUSTMENT

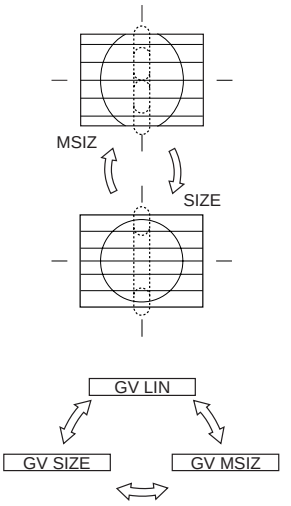
1. Adjust GV LIN so that the vertical lines at the top and bottom of the screen are symmetrical.



GREEN VERTICAL SIZE ADJUSTMENT

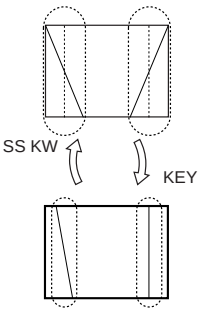
1. Adjust with GV MSIZE so that the sizes for the top and bottom sections of the screen and for both sides of the center section of the screen are equal.
2. Set the vertical size to the prescribed value with GV SIZE.
3. Adjust GV MSIZ and GV SIZE watching the vertical line at the center section of the screen.
4. While tracking, adjust with GV MSIZ and GV SIZE so that the lattice intervals for the vertical line section of the center section of the screen are equal and so that the vertical size is the regulation value.
5. If GV LIN is out of place when the GV MSIZ and GV SIZE adjustment is complete, adjust again while tracking.

• If there is no need to adjust GV SIZE in SUB with just the V SIZE adjustment in MAIN, this can save power.



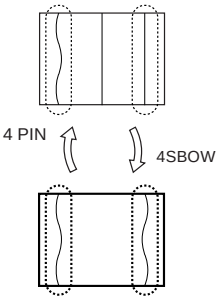
GREEN HORIZONTAL TRAPEZOIDAL DISTORTION ADJUSTMENT

1. Adjust with GH SSKW so that the tilt of the vertical lines at both ends of the screen is symmetrical left and right.
2. Adjust with GH KEY so that there is no tilt in the vertical lines at both ends of the screen.
3. If there is a tilt on either the left or right after the GH KEY adjustment, adjust while tracking.



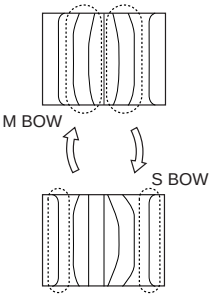
GREEN HORIZONTAL QUATERNARY ADJUSTMENT

1. Correct the quaternary distortion with GH 4PIN.
2. While balancing, correct the quaternary distortion of both end sections of the screen with GH 4SBOW.
3. While tracking, adjust with GH 4PIN and RGH 4SBOW.



GREEN HORIZONTAL ASYMMETRICAL PIN DISTORTION ADJUSTMENT

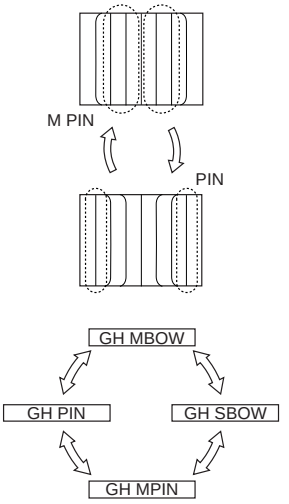
1. Adjust with GH MBOW so that the pin asymmetry at both sides of the center section of screen is symmetrical.
2. Adjust with GH SBOW so that the bow at both end sections of the screen is symmetrical left and right.
3. While tracking, adjust with GH MBOW and GH SBOW so that the bow of vertical lines on the entire screen is symmetrical left and right.



GREEN HORIZONTAL SYMMETRICAL PIN DISTORTION ADJUSTMENT

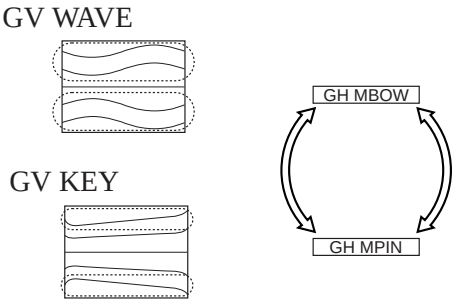
1. Adjust the pin distortion at both sides of the center section of the screen with GH MPIN.
2. Adjust the pin distortion at both end sections of the screen with GH PIN.
3. While tracking, adjust with GH MPIN and GH PIN so that the PIN of vertical lines on the entire screen have no bowing.
4. If there is asymmetrical pin distortion after the GH MPIN and GH PIN adjustments, adjust with GH MBOW and GH SBOW while tracking.

• With just the PIN AMP adjustment in MAIN, if there is no need to adjust GV PIN in SUB, this can save power.



GREEN VERTICAL WAVE (TERTIARY DISTORTION) ADJUSTMENT

1. Take the screen top and bottom horizontal lines with GV WAVE and find the secondary and quaternary waveform.
2. There is KEY distortion after the GV WAVE adjustment, so adjust withRGV WAVE and RGV KEY while tracking.

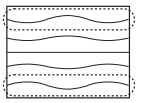


GREEN VERTICAL QUATERNARY DISTORTION ADJUSTMENT

1. Correct the quaternary distortion of the horizontal lines at the top and bottom sections of the screen with GV 4PIN.

1) Since there is no 4SBOW for vertical correction, there will be a slight imbalance, but adjust to eliminate the distortion from the horizontal line at either the top or the bottom of the screen.
2) In many cases, the horizontal lines at the top and bottom sections of the screen are not straight lines after the adjustment. As long as the secondary distortion is mild enough that it can be corrected with the PIN adjustment, this is OK.

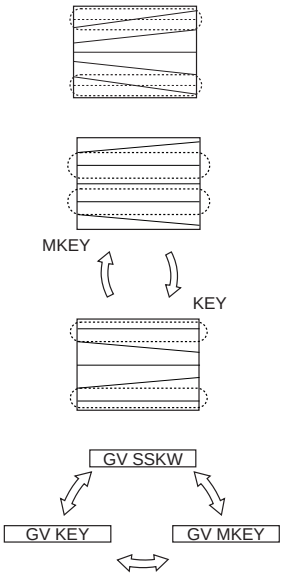
GV 4PIN



GREEN VERTICAL TRAPEZOIDAL DISTORTION ADJUSTMENT

1. Adjust with GV SSKW so that the tilt of the horizontal lines at the top and bottom sections of the screen is symmetrical about the center position horizontal line.
2. Adjust with GV MKEY so that there is no tilt for the line sections at both sides of the horizontal lines at the center section of the stream.
3. Adjust with GV KEY so that there is no tilt for the horizontal lines at the top and bottom sections of the screen.
4. While tracking, adjust with GV MKEY and GV KEY so that there is no tilt for the horizontal lines on the entire screen.
5. If the tilt is unbalanced after the GV MKEY and GV KEY adjustment, adjust again with GV SSKW.

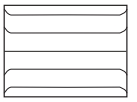
GV SSKW



GREEN VERTICAL ASYMMETRICAL PIN DISTORTION (SECONDARY DISTORTION) ADJUSTMENT

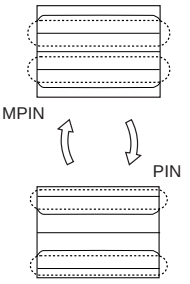
1. Correct the asymmetrical pin distortion at the top and bottom sections of the screen with RGV SBOW.

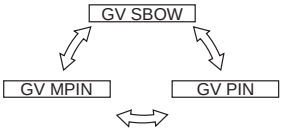
GV SBOW



GREEN VERTICAL ASYMMETRICAL PIN DISTORTION ADJUSTMENT

1. Adjust the pin distortion for both side sections and the center of the screen with GV MPIN.
2. Adjust with GV PIN so that the horizontal lines at the top and bottom sections of the screen are straight lines.
3. Adjust with GV MPIN and GV PIN so that there is no curve in the horizontal lines on the entire screen.
4. After the adjustments in Items 1-3, adjust the tracking with GV SBOW, GV MPIN, and GV PIN.





GREEN AND RED REGISTRATION ADJUSTMENT (RRH, RRV)

1. Receive a cross-hatch signal.
2. Adjust so that the red lines lay on the green lines. Adjust with the same procedure as the GREEN SUB adjustment.

Notes: 1. The main correction is not carried out during red registration adjustment.
2. Beware. The green adjustment items can be changed by mistake.
3. Unlike for green, adjust within the range -127 ~ +128.

GREEN AND BLUE REGISTRATION ADJUSTMENT (RBH, RBV)

1. Receive a cross-hatch signal.
2. Adjust so that the blue and green lines are on top of each other.

Notes : 1. The main correction is not carried out during RED registration adjustment.
2. Beware. The GREEN and RED adjustment items can be changed by mistake.

3-11. AGC ADJUSTMENT

1. Receive an off-air signal.
2. Adjust the AGC VR (TU 1001) so that there is no snow noise and cross-modulation.

3-12. WHITE BALANCE ADJUSTMENT

1. Receive the monoscope pattern signal and adjust the picture quality with the menu.
2. Adjust service mode SBRT so that the signal 10 IRE section barely glows.
3. Receive the all-white pattern signal.
4. Adjust the white balance with service mode GCUT and BCUT.
5. Adjust service mode SBRT so that the signal 100 IRE section barely glows.
6. Adjust the white balance with service mode GAMP and BAMP.
7. Repeatedly adjust the white balance for the minimum and maximum picture settings.

SECTION 4
SAFETY RELATED ADJUSTMENTS

[G BOARD]

4-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT

When replacing the following components marked with ◪ on the schematic diagram always check HV regulation, and if necessary re-adjust.

⋈: C514
◪: C514, C515, C516
IC651
T502,T503, T504 (FBT)
D.Y

OPERATION CHECK

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block. **(Fig.4-1)**
2. Power on the set.
3. Receive the dot signal. (PICTURE and BRIGHTNESS to minimum)
4. Check that the HV static voltmeter is reading 31.00±1.0kVdc.

HV Regulation adjustment

1. Connect a HV static voltmeter to the unconnected plug of the hight-voltage block.
2. Power on the set.
3. Receive the dot signal. (PICTURE and BRIGHTNESS to minimum)
4. If anode voltage is 32kV or higher, replace C514 of 390PF/2kV with that of 680PF/2kV, and check if the voltage is within the standard range.
5. If anode voltage is 30kV or lower, replace C514 of 390PF/2kV with that of 100PF/2kV, and check if the voltage is within the standard range. **(Fig.4-2)**

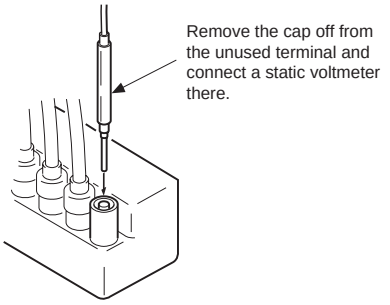


Fig. 4-1

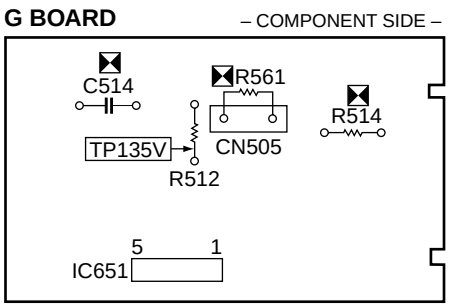


Fig. 4-2

4-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT

When replacing the following components marked with ◪ on the schematic diagram always check hold-down voltage and if necessary re-adjust.

⋈: R514, R561
◪: C507, C513
D501, D504, D507
IC301, IC501, IC651
R502, R514, R516, R517, R539, R560, R561
T502, T503, T504 (FBT)
D.Y

OPERATION CHECK

1. Remove CN651 connecter.
2. Short-circuit across TP-PROT (R692) and ground.
3. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
4. Connect a 220k variable resistor, across pin ③ and pin ⑤ of IC651 set to maximum value.
5. Power on the set.
6. Receive the dot signal. (PICTURE and BRIGHTNESS to minimum)
7. Gradually lower the value of the variable resistor and check that the hold-down circuit operates at a static voltmeter reading of 33.5±1.0kVdc when the raster disappears.

HV HOLD-DOWN ADJUSTMENT

1. Repart steps ① ~ ⑦ as above.
2. If hold down voltage is 34.5kV or higher, remove R514, mount a resistor (390kΩ, 1/4W : RN) onto R561 instead, and check again if the hold-down voltage is within the standard range.
3. If hold down voltage is 32.5kV or lower, mount a resistor (220kΩ, 1/4W : RN) onto R561 and check again if the hold-down voltage is within the standard range. **(Fig.4-2)**

NOTE : Please finish the adjustment as soon as possible

4-3. +B MAX VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC651.

1. Supply 130VAC to with variable autotransformer.
2. Input a dot signal.
3. Set the PICTURE control and the BRIGHTNESS controls to minimum.
4. Confirm the voltage of G BOARD TP135V is less than 137.0Vdc.
5. If step 4 is not satisfied, replace IC651 and repeat above steps. **(Fig.4-2)**

4-4. +B OVP CONFIRMATION

1. Remove CN651 connector.
2. Connect a voltmeter to TP135V, and TP (PROT) and ground.
3. Connect a 220kΩ variable resistor, across pin ③ and pin ⑤ of IC651 set to maximum value.
4. Supply 120VAC to variable autotransformer.
5. Set PICTURE and the BRIGHTNESS controls to minimum.
6. Gradually turn the 220kΩ variable resistor, and check if OVP works properly when the voltage of TP135V is between 139.0 ~ 151.5V. **(Fig.4-2)**

SECTION 5
CIRCUIT ADJUSTMENTS

5-1. RF AGC

1. Input a color-bar signal.
2. Adjust AGC VR of TU1101 so that snow noise, and crossmodulation disapper from the picture.
3. Verify picture quality on each channel.

5-2. BER DISPLAY ADJUSTMENT (DISP)

1. Receive the cross-hatch signal.
2. Set to Service mode.
3. Select " DISP ", and adjust so that the blank spaces on the both sides of picture bar become equal.
4. Write the data into memory.
   MUTING → ENTER

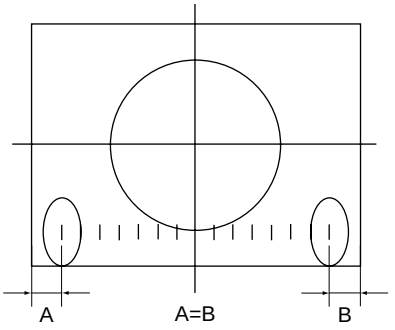


Fig. 5-1

5-3. SUB CONTRAST ADJUSTMENT (SCON)

1. Receive the color-bar signal.
2. PICTURE : maximum
   COLOR : minimum
   BRIGHTNESS : minimum
   RON---1 GON---0 BON---0
3. Set to service mode.
4. Connect an oscilloscope between ⑥ pin of CN004 (A board) and ground.
5. Select " SCON ", and adjust so that the wave from level is 1.65±0.1Vp-p.
6. Write the data into memory.
   MUTING → ENTER

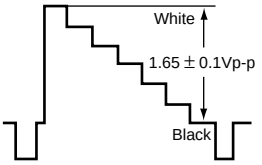


Fig. 5-2

5-4. SUB-HUE AND SUB-COLOR ADJUSTMENT (SHUE, SCOL)

1. Receive the color-bar signal.
2. PICTURE : maximum
   COLOR : minimum
   BRIGHTNESS : minimum
3. Set to service mode.
4. Connect an oscilloscope between ⑦ pin of CN004 (A Board) connecter and ground.
5. Select " SHUE " and " SCOL ", and adjust them to have VB1 = VB4 and VB2 = VB3 in the waveform levels.
6. Raise SCOL data 1 steps higher.
7. Write the data into memory.
   MUTING → ENTER

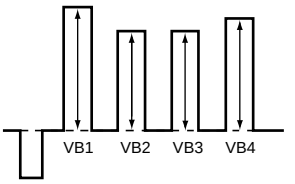
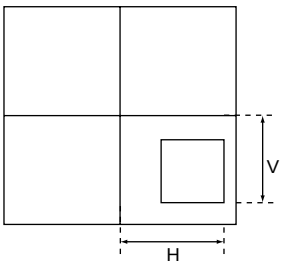


Fig. 5-3

5-5. P IN P POSITION ADJUSTMENT (PIPH, PIPV)

1. Receive the monoscope signal.
2. Set to P IN P (□■) mode, and to Service mode.
3. Check the SUB PICTURE position.
4. Select " PIPH " and " PIPV " and adjust H/V position to the center level.
5. Write the data into memory.
   MUTING → ENTER



H : 7.00 ± 0.25sq
V : 5.25 ± 0.25sq

Fig. 5-4

5-6. P IN P SUB CONTRAST ADJUSTMENT (PCON)

1. Receive the color-bar signal.
2. PICTURE : maximum
   COLOR : minimum
   BRIGHTNESS : minimum
3. Set to service mode.
4. Connect an oscilloscope between ⑨ pin of CN303 (A Board) and ground.
5. Select " PCON " and adjust so that waveform level is $1.4 \pm \frac{0.00}{0.05}$ Vp-p.
6. Write the data into memory.
   MUTING → ENTER

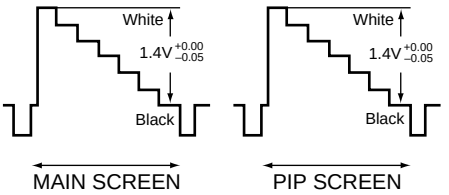


Fig. 5-5

5-7. P IN P SUB HUE, SUB COLOR ADJUSTMENT (IHUE, ICOL)

1. Receive the color-bar signal.
2. PICTURE : maximum
   COLOR : center
   BRIGHTNESS : center
3. Set to service mode.
4. Connect an oscilloscope between ⑤ pin of CN303 (A Board) and ground.
5. Select " IHUE " and " ICOL " , adjust them to have VB1 = VB4 and VB2 = VB3 in the waveform levels.
6. Raise " ICOL " data 1 steps higher.
7. Write the data into memory.
   MUTING → ENTER

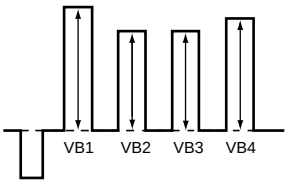
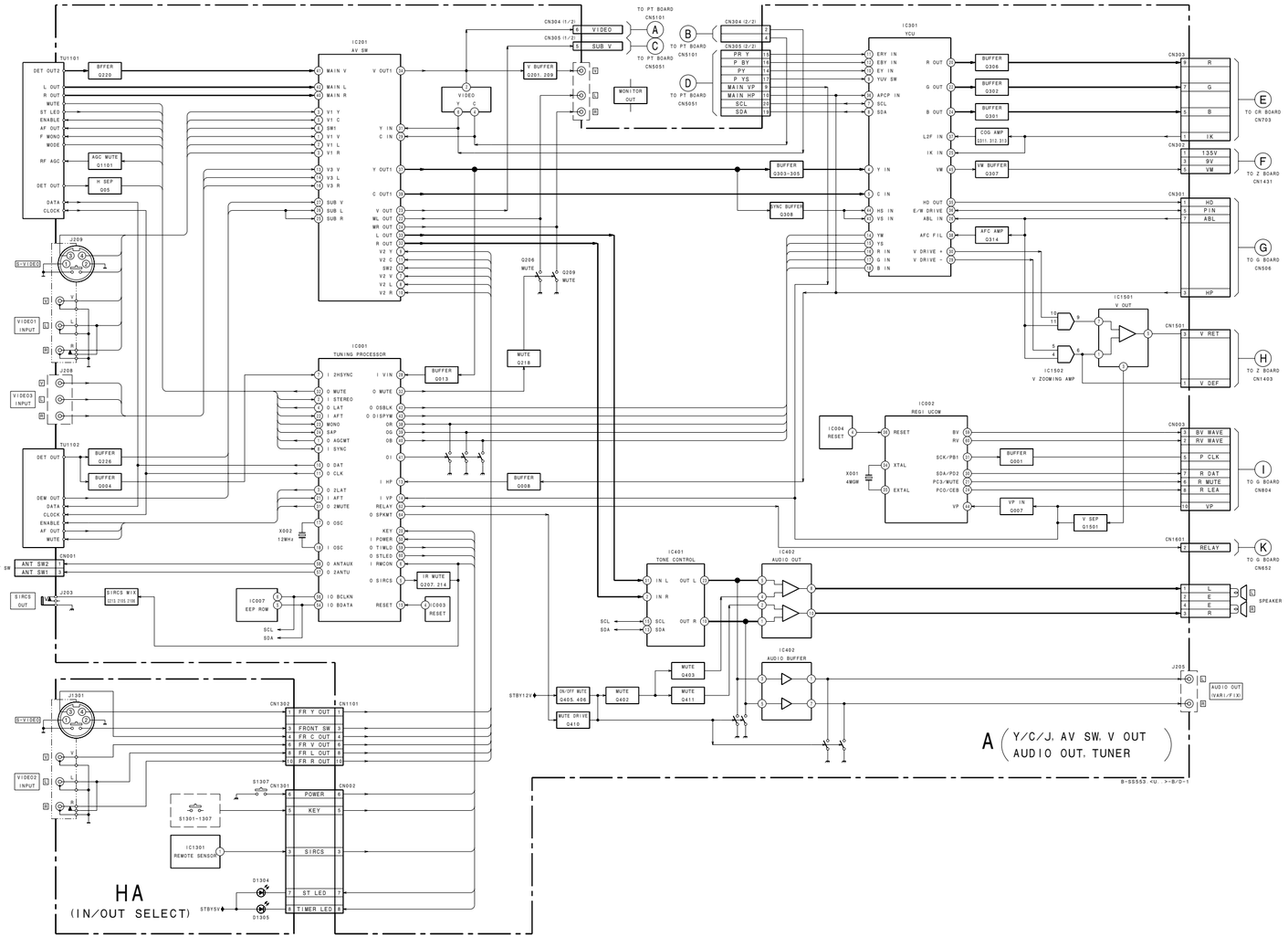


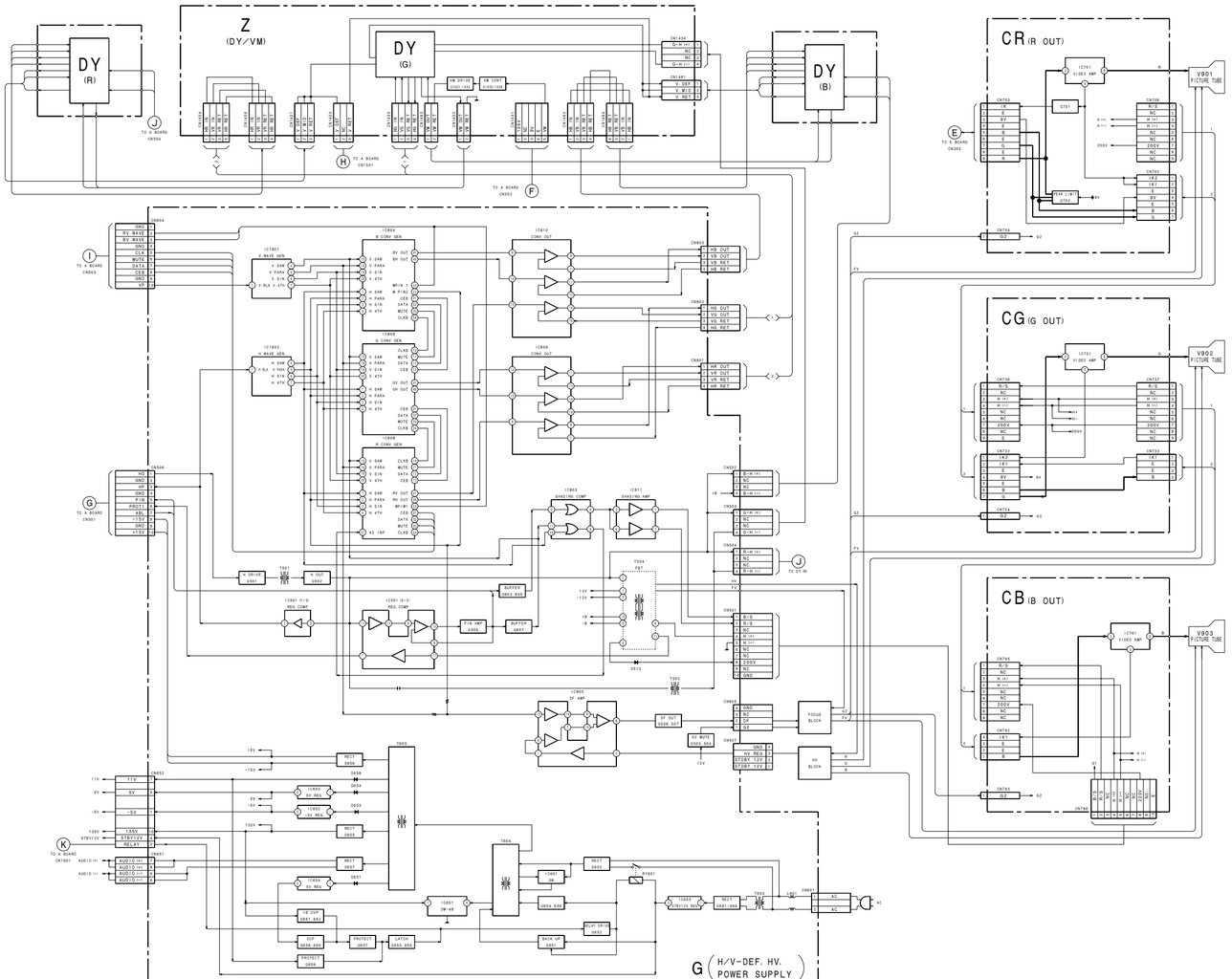
Fig. 5-6

SECTION 6
DIAGRAMS

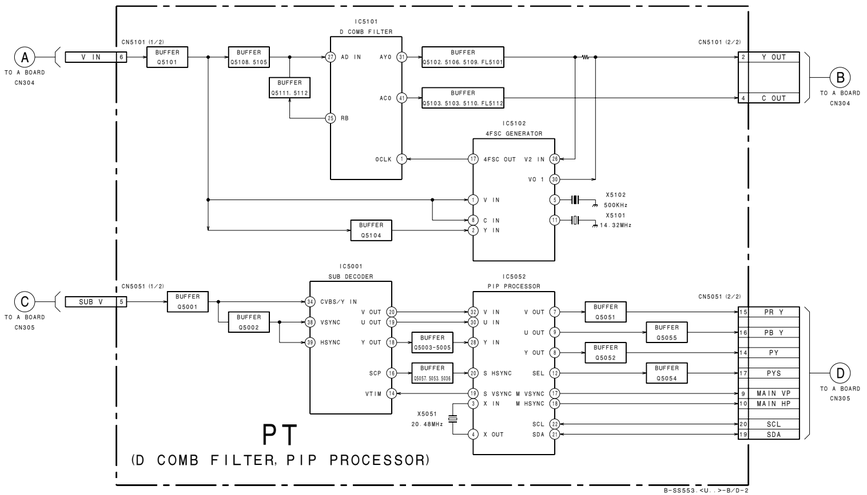
6-1. BLOCK DIAGRAM (1)



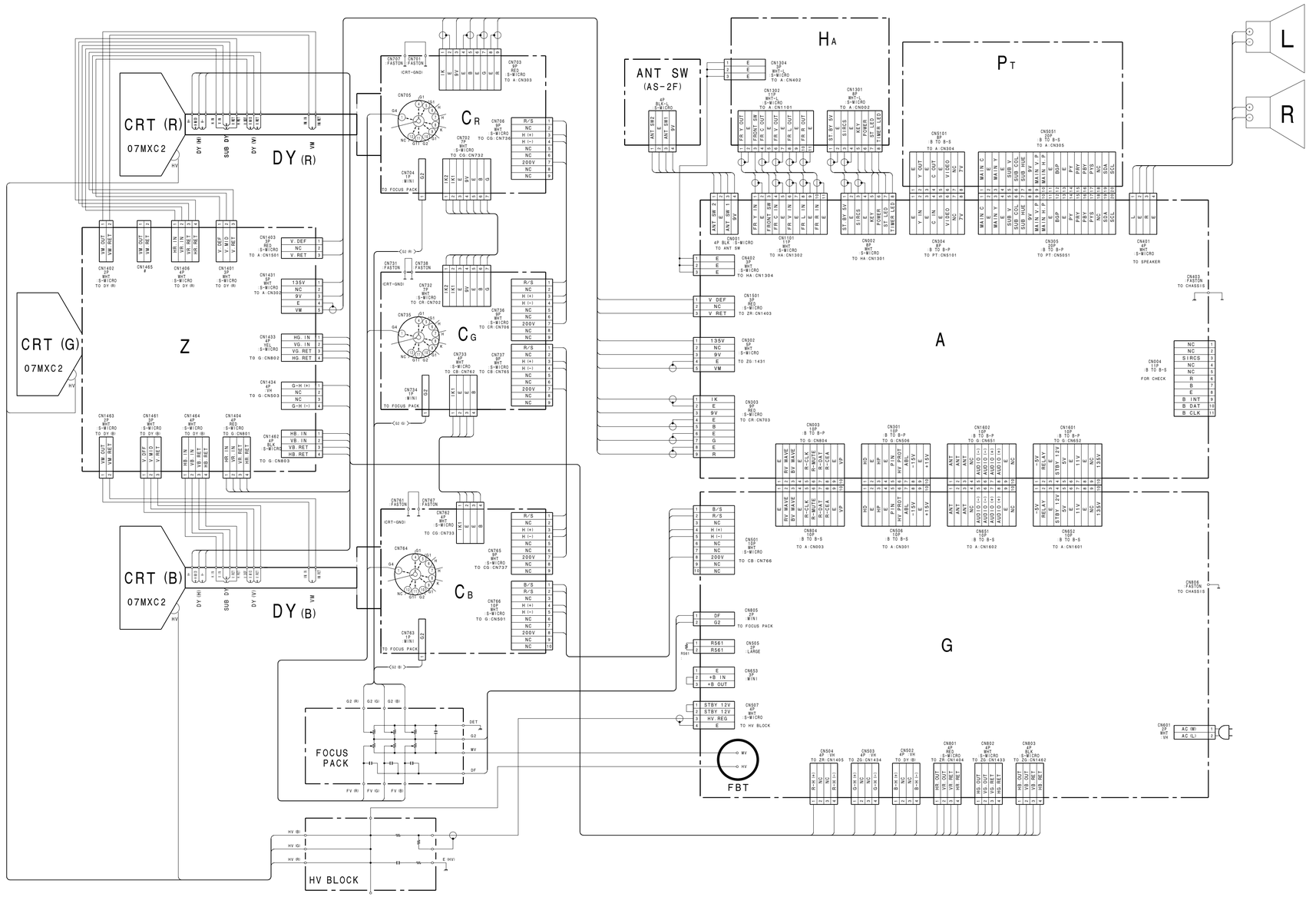
BLOCK DIAGRAM (2)



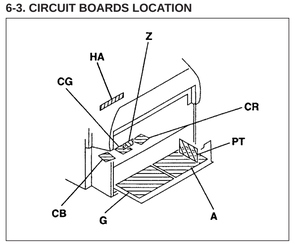
BLOCK DIAGRAM (3)



6-2. FRAME SCHEMATIC DIAGRAM



6-3. CIRCUIT BOARDS LOCATION



6-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- Capacitors without voltage indication are all 50V.
- All resistors are in ohms.
  kΩ=1000Ω, MΩ=1000kΩ
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : 1/4 W

- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-chassis.
- The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ◪ and repeat the adjustment until the specified value is achieved.
  (Refer to R514,R561 and C514 adjustment on Page xx – xx.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (◪)	Adjustment (⋈)
C514, C515, C516, IC651, T502, T503, T504, DY	HV Reagurator (C514)
C507, C513, D501, D504, D507, IC301, IC501, IC651, R502, R514, R516, R517, R539, R560, R561, T502, T503, T504, DY	HV HOLD-DOWN (R514, R561)

- As to the voltage volue shown by the semiconductors on the Shematic Diagram, see the another list
- Readings are taken with a color-bar signal input.
- Readings are taken with a 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
  + : Measurement impossibility.
- Circled numbers are waveform references.

- : B+ bus.
- : B– bus.
- : signal path.(RF)

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The symbol ▭ display is on the component side.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

The symbol ▭ indicate fast operating fuse. Replace only with fuse of same rating as maked.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole ▭ indique une fusible a action rapide. Doit etre remplacee par une fusible de meme yaleur, comme maque.

Terminal name of semiconductors in silk screen printed circuit (✱)

	Device	Printed symbol	Terminal name	Circuit
①	Transistor	T	Collector / Base / Emitter	
②	Transistor	–	Collector / Base / Emitter	
③	Diode	⊣	Cathode / Anode	
④	Diode	T	Cathode / Anode / (NC)	
⑤	Diode	–	Cathode / Anode / (NC)	
⑥	Diode	T	Common Anode / Cathode	
⑦	Diode	–	Common Anode / Cathode	
⑧	Diode	T	Common Anode / Anode	
⑨	Diode	–	Common Anode / Anode	
⑩	Diode	T	Common Cathode / Cathode	
⑪	Diode	–	Common Cathode / Cathode	
⑫	Diode	∣	Anode / Cathode / Cathode / Anode	
⑬	Transistor (FET)	∣	Drain / Source / Gate	
⑭	Transistor (FET)	⊢	Drain / Source / Gate	
⑮	Transistor (FET)	∣	Source / Drain / Gate	
–	Discrete semiconductot			

(Chip semiconductors that are not actually used are included.)

Ver.1.0

A BOARD IC VOLTAGE LIST

REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.
IC001	①	0	IC001	㊽	4.7	IC201	①	4.2	IC301	⑮	0	IC401	㊷	0
	②	0		㊾	8.8		②	4.9		⑯	0		㊸	0
	③	0		㊿	0		③	4.2		⑰	5.0		㊹	4.4
	④	0		(51)	3.7		④	4.8		⑱	5.0		㊺	4.9
	⑤	0		(52)	0		⑤	4.7		⑲	5.0		㊻	4.4
	⑥	4.8		(53)	0		⑥	5.0		⑳	6.7		㊼	4.4
	⑦	0		(54)	4.1		⑦	4.2		㉑	0.9		㊽	4.4
	⑧	0		(55)	0		⑧	5.0		㉒	6.5		㊾	4.4
	⑨	0		(56)	4.4		⑨	4.2		㉓	0.8		㊿	4.4
	⑩	0		(57)	4.9		⑩	4.8		㉔	6.7		(51)	4.4
	⑪	4.9		(58)	4.7		⑪	4.7		㉕	0.8		(52)	5.1
	⑫	4.3		(59)	0		⑫	4.8		㉖	4.1	IC402	①	4.4
	⑬	0		(60)	4.2		⑬	4.2		㉗	1.5		②	4.4
	⑭	4.9		(61)	GND		⑭	GND		㉘	5.4		③	4.4
	⑮	GND		(62)	2.4		⑮	4.2		㉙	0.6		④	GND
	⑯	2.4		(63)	2.1		⑯	GND		㉚	2.9		⑤	4.4
	⑰	2.1		(64)	4.9		⑰	GND		㉛	3.0		⑥	4.4
	⑱	0		(65)	GND		⑱	4.8	IC301	㉜	3.8		⑦	4.4
	⑲	4.9		(66)	GND		⑲	4.8		㉝	4.2		⑧	9.0
	⑳	2.3		(67)	GND		⑳	GND		㉞	4.6		⑨	1.4
	㉑	2.4		(68)	GND		㉑	4.3		㉟	8.7		⑩	3.0
	㉒	0		(69)	GND		㉒	6.9		㊱	3.4		⑪	15.3
IC002	㉓	4.8		(70)	GND		㉓	4.2		㊲	3.4		⑫	3.1
	㉔	GND		(71)	GND		㉔	4.2		㊳	4.1	IC403	①	1.4
	㉕	1.8		(72)	GND		㉕	4.2		㊴	4.1		②	0
	㉖	2.2		(73)	GND		㉖	6.2		㊵	2.3		③	0.2
	㉗	5.0		(74)	4.8		㉗	4.8		㊶	GND		④	28.2
	㉘	4.8		(75)	4.8		㉘	GND		㊷	2.6		⑤	0.1
	㉙	1.9		(76)	0		㉙	5.7		㊸	2.7		⑥	GND
	㉚	0		(77)	2.2		㉚	4.3		㊹	3.9		⑦	1.2
	㉛	2.8		(78)	2.2		㉛	4.2		㊺	3.0		⑧	14.4
	㉜	0		(79)	2.2		㉜	5.1		㊻	5.7		⑨	-14.0
	㉝	0		(80)	GND		㉝	GND		㊼	0.3	IC1501	①	-15.4
	㉞	0		(81)	GND		㉞	4.3		㊽	GND		②	0.8
	㉟	0		(82)	4.9		㉟	4.4		㊾	GND		③	14.5
	㊱	0		(83)	4.9		㊱	8.9		㊿	GND		⑦	1.2
	㊲	0		(84)	GND		㊲	3.5	IC201	①	4.4		⑧	-0.3
	㊳	0	IC003	①	GND		㊳	4.2		②	4.4		⑨	0
	㊴	0		②	4.9		㊴	5.2		③	4.4		⑩	0
	㊵	0		③	5.0		㊵	4.2		④	4.4	IC1502	①	GND
	㊶	2.7	IC004	①	GND		㊶	2.1		⑤	4.4		②	0
	㊷	2.7		②	4.9		㊷	5.6		⑥	4.4		⑨	-0.3
	㊸	4.9		③	4.9		㊸	3.9		⑦	4.4		⑩	4.9
	㊹	4.9	IC007	①	GND	IC401	㊹	4.4		⑧	4.4		⑪	-5.1
	㊺	GND		②	GND		㊺	3.5		⑨	4.4	IC1601	①	10.9
	㊻	GND		③	GND	IC301	㊻	8.8		⑩	3.8		⑧	GND
	㊼	4.7		④	GND		㊼	4.8		⑪	4.8		⑨	9.0
	㊽	0		⑤	4.8		㊽	4.8		⑫	4.8		⑩	GND
	㊾	0		⑥	4.8		㊾	0		⑬	GND		⑪	11.9
	㊿	4.8		⑦	6.4		㊿	6.1		⑭	3.9	IC1602	⑧	GND
	(51)	4.7		⑧	GND		(51)	6.1		⑮	3.9		⑨	5.0
	(52)	4.7	IC201	①	4.9		(52)	6.1		⑯	1.8			
	(53)	4.7					(53)	GND		⑰	1.8			

•All voltage are in V.

•Pin number which are not described are not used.

• A BOARD WAVEFORMS

① 1.4Vp-p (H)	② 2.2Vp-p (H)	③ 2.2Vp-p (H)
④ 2.2Vp-p (H)	⑤ 2.2Vp-p (H)	⑥ 2.2Vp-p (H)
⑦ 5.0Vp-p (V)	⑧ 5.4Vp-p (4MHz)	⑨ 4.0Vp-p (H)
⑩ 5.0Vp-p (H)	⑪ 5.0Vp-p (V)	⑫ 3.4Vp-p (12MHz)
⑬ 2.0Vp-p (H)	⑭ 0.14Vp-p (3.56MHz)	⑮ 2.0Vp-p (H)
⑯ 2.0Vp-p (H)	⑰ 2.4Vp-p (H)	⑱ 2.4Vp-p (H)
⑲ 2.4Vp-p (H)	⑳ 2.0Vp-p (H)	㉑ 2.0Vp-p (H)
㉒ 0.13Vp-p (500kHz)	㉓ 4.8Vp-p (H)	㉔ 6.0Vp-p (H)
㉕ 1.3Vp-p (V)	㉖ 1.3Vp-p (V)	㉗ 60Vp-p (V)

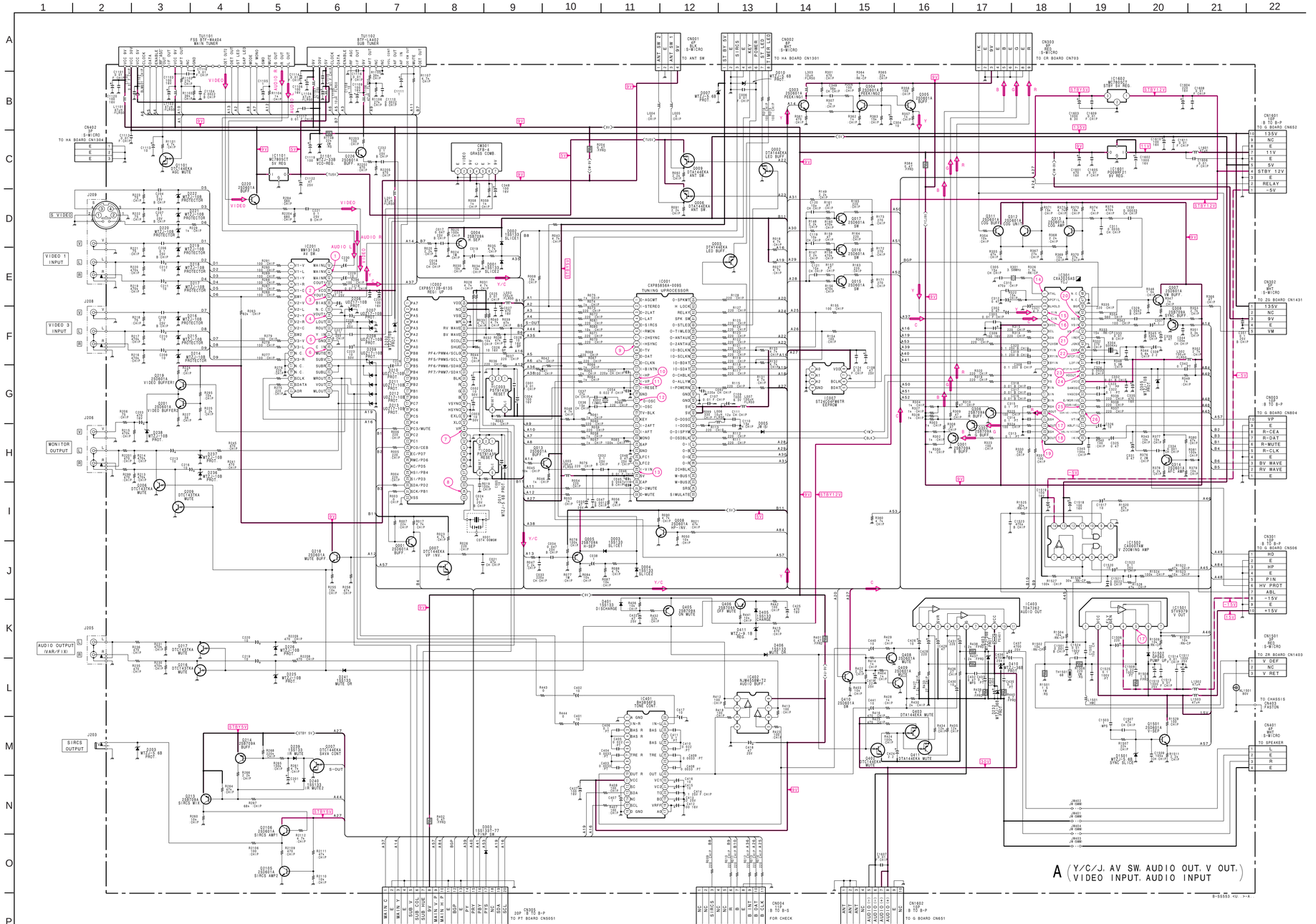
A BOARD TRANSISTOR VOLTAGE LIST

REF.		VOL.	REF.		VOL.	REF.		VOL.
Q001	B	0	Q213	B	4.9	Q312	B	5.7
	E	GND		E	5.0		E	5.1
	C	4.8		C	0.3		C	8.8
Q002	B	0		B	5.0		B	5.3
	E	2.0	Q214	E	5.0	Q313	E	4.8
	C	GND		C	4.9		C	7.7
Q003	B	3.8		B	0		B	1.5
	E	3.8	Q216	E	GND	Q314	E	0.9
	C	GND		C	0		C	4.5
Q004	B	5.4		B	0		B	3.6
	E	4.9	Q217	E	GND	Q402	E	GND
	C	1.0		C	0		C	0
Q005	B	4.9		B	0		B	13.2
	E	4.9	Q218	E	0	Q403	E	26.3
	C	0.7		C	8.9		C	26.2
Q006	B	8.8		B	5.1		B	11.8
	E	8.9	Q219	E	4.5	Q405	E	11.9
	C	0		C	8.2		C	-1.3
Q007	B	0.1		B	4.8		B	11.9
	E	GND	Q220	E	4.1	Q406	E	11.8
	C	4.8		C	9.0		C	-1.3
Q008	B	0.1		B	5.1		B	3.6
	E	GND	Q226	E	4.4	Q408	E	GND
	C	4.3		C	8.4		C	0
Q009	B	0		B	0.9		B	3.6
	E	5.3	Q301	E	1.5	Q409	E	GND
	C	4.8		C	GND		C	0
Q013	B	4.3		B	0.9		B	3.6
	E	3.7	Q302	E	1.5	Q410	E	3.6
	C	5.0		C	GND		C	4.9
Q015	B	-0.2		B	4.4		B	13.2
	E	GND	Q303	E	3.8	Q411	E	26.3
	C	0		C	8.8		C	26.2
Q016	B	-0.2		B	2.9		B	0
	E	GND	Q304	E	3.5	Q1101	E	GND
	C	0		C	6.6		C	4.1
Q017	B	-0.2		B	6.6		B	-0.4
	E	GND	Q305	E	5.9	Q1501	E	0.1
	C	0		C	8.2		C	14.4
Q201	B	1.5		B	0.9		B	0.6
	E	0.8	Q306	E	1.6	Q2105	E	GND
	C	4.5		C	GND		C	0
Q206	B	0		B	5.0		B	0
	E	GND	Q307	E	4.3	Q2106	E	0
	C	0		C	8.8		C	5.0
Q207	B	0		B	4.5			
	E	GND	Q308	E	5.1			
	C	5.3		C	GND			
Q209	B	0	Q311	B	4.2			
	E	GND		E	5.1			
	C	0		C	8.8			

All voltages are in V.

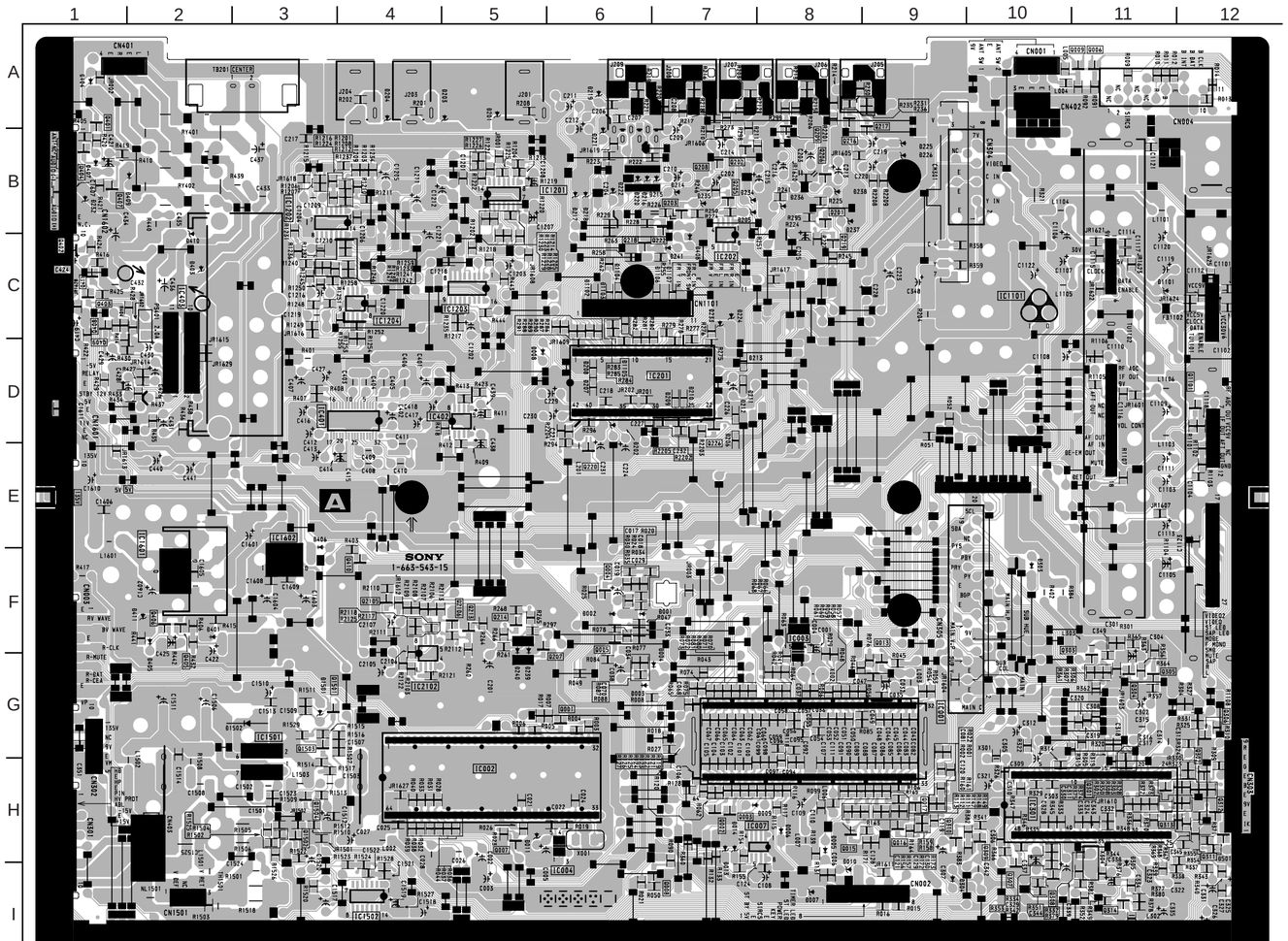
Schematic diagram

A board ➡



A [TUNER, AV SW, Y/C/J, AUDIO OUT, V OUT
AV INPUT]

– A Board –



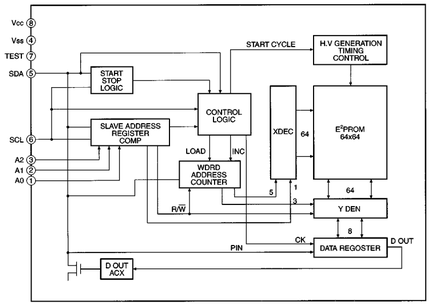
A BOARD

DIODE		*
D001	F-6	–
D002	F-6	–
D003	G-6	–
D004	G-7	–
D007	I-8	–
D010	I-8	–
D011	H-5	–
D202	D-6	–
D203	D-7	③
D206	D-7	③
D207	D-6	③
D208	D-6	③
D209	D-7	③
D210	D-7	③
D211	D-7	③
D212	D-7	③
D213	D-7	③
D214	B-7	–
D215	B-7	–
D216	B-6	–
D217	B-6	–
D218	B-6	–
D219	A-6	–
D220	B-6	–
D221	B-6	–
D222	B-6	–
D225	B-9	–
D226	B-9	–
D232	B-1	–
D236	B-8	–
D237	B-8	–
D238	B-8	–
D239	F-5	–
D240	F-5	–
D241	C-7	–
D305	I-11	–
D401	F-2	–
D403	C-2	–
D405	F-2	–
D406	F-3	–
D408	C-7	–
D410	C-2	–
D411	F-2	–
D1101	C-11	–
D1102	C-6	③
D1103	C-6	③
D1104	C-6	③
D1105	C-6	③
D1106	C-7	③
D1107	C-7	③
D1501	G-3	–
D1502	G-3	–

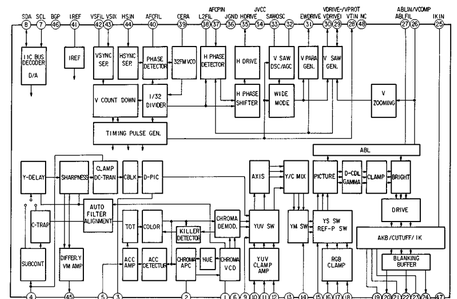
TRANSISTOR		*
Q001	G-1	①
Q002	H-7	①
Q003	H-7	①
Q004	F-6	①
Q005	F-6	①
Q006	A-11	①
Q007	H-5	①
Q008	I-7	①
Q009	A-11	①
Q013	G-9	①
Q015	H-8	①
Q016	H-9	①
Q017	H-9	①
Q201	B-8	①
Q206	B-8	①
Q207	F-5	①
Q209	A-8	①
Q213	F-5	①
Q214	F-5	①
Q216	A-8	①
Q217	A-9	①
Q218	C-6	①
Q219	C-8	①
Q220	E-6	①
Q226	D-7	①
Q301	H-11	①
Q302	H-12	①
Q303	G-11	①
Q304	G-11	①
Q305	G-11	①
Q306	G-12	①
Q307	I-10	①
Q308	I-10	①
Q311	H-12	①
Q312	H-12	①
Q313	H-11	①
Q314	I-11	①
Q402	C-1	①
Q403	C-1	①
Q405	F-2	①
Q406	F-2	①
Q408	C-1	①
Q409	D-1	①
Q410	F-4	①
Q1101	D-12	①
Q1501	G-3	①
Q2105	F-4	①
Q2106	F-5	①

IC	
IC001	G-8
IC002	H-5
IC003	F-8
IC004	H-6
IC007	H-8
IC201	D-6
IC301	H-11
IC401	D-4
IC402	D-5
IC403	D-2
IC1101	C-10
IC1501	G-3
IC1502	I-4
IC1601	F-2
IC1602	F-3

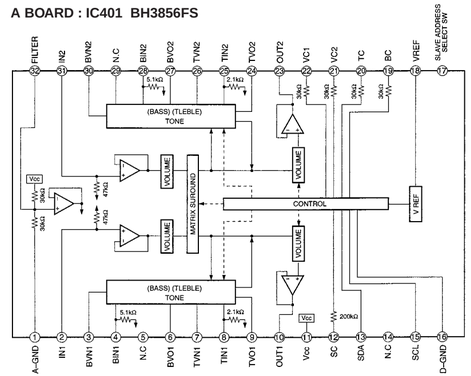
A BOARD : IC007 ST24C04FM6TR



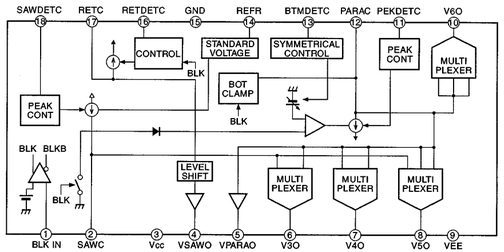
A BOARD : IC301 CXA2025AS



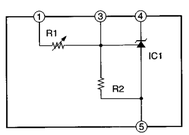
A BOARD : IC401 BH3856FS



G BOARD : IC801, 802 PA0053B



G BOARD : IC651 DM-58

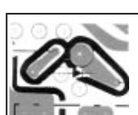


G BOARD

DIODE		*
D501	F-10	–
D502	F-9	–
D503	H-7	–
D504	F-10	–
D507	H-10	–
D508	G-6	–
D509	G-5	–
D510	G-4	–
D511	F-8	–
D513	H-3	–
D514	F-1	–
D515	I-1	–
D517	H-7	–
D519	H-10	–
D520	I-2	–
D521	H-4	–
D524	H-11	–
D527	F-9	–
D528	F-9	–
D602	B-3	–
D651	D-4	–
D652	D-4	–
D653	C-7	–
D654	C-7	–
D655	D-5	–
D656	C-6	–
D657	B-6	–
D658	B-6	–
D660	D-4	–
D661	E-6	–
D662	A-6	–
D664	A-7	–
D669	D-3	–
D670	A-7	–
D691	E-1	–
D692	E-2	–
D693	E-2	–
D694	E-1	–
D801	G-14	–
D802	G-14	–
D803	G-14	–
D804	G-14	–
D809	B-12	–
D810	B-9	–
D820	F-14	–
D828	H-14	–
D829	I-13	–
D835	D-11	–
D840	I-13	–
D842	I-13	–
D845	I-13	–
D846	I-13	–
D847	H-11	–
D848	G-12	–
D849	G-11	–
D850	H-14	–
D852	H-12	–
D853	H-11	–
D854	H-12	–
D855	H-12	–
D856	H-12	–
D857	H-11	–
D859	I-11	–
D860	I-12	–

TRANSISTOR		*
Q501	G-5	–
Q502	F-5	–
Q503	H-10	–
Q504	I-11	–
Q505	F-9	–
Q506	H-10	–
Q507	H-9	–
Q651	D-4	–
Q652	A-7	–
Q653	A-7	–
Q654	A-6	–
Q655	A-7	–
Q656	A-6	–
Q657	D-5	–
Q658	E-5	–
Q659	A-7	–
Q660	D-5	–
Q661	E-4	–
Q662	D-5	–
Q802	H-13	–
Q803	G-13	–
Q804	G-13	–
Q805	I-14	–
Q809	B-12	–
Q810	B-9	–

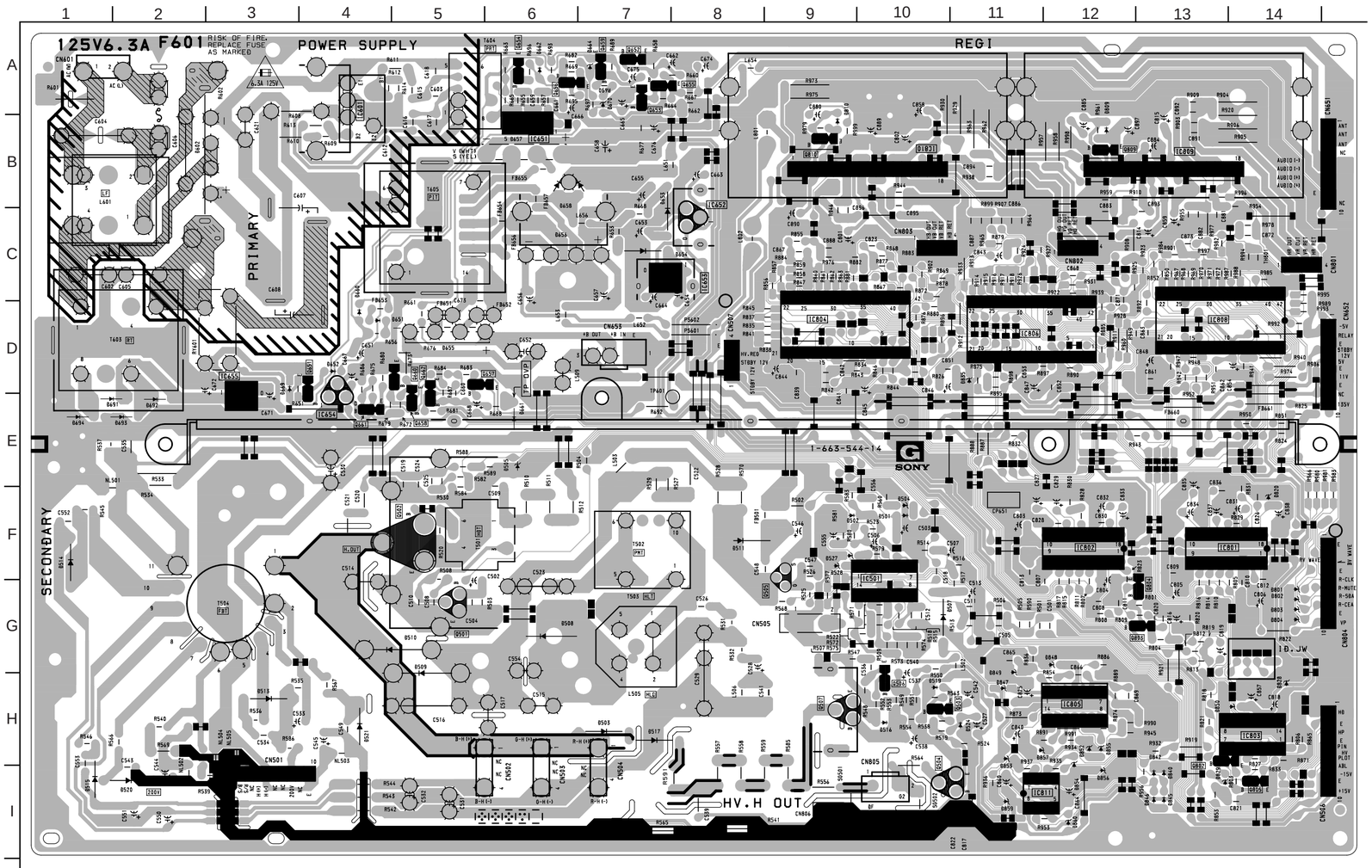
IC	
IC501	F-10
IC601	A-4
IC651	B-6
IC652	C-8
IC653	C-7
IC654	E-4
IC655	E-3
IC801	F-14
IC802	F-12
IC803	H-14
IC804	D-9
IC805	H-12
IC806	D-11
IC808	D-13
IC809	B-13
IC810	B-10
IC811	I-11

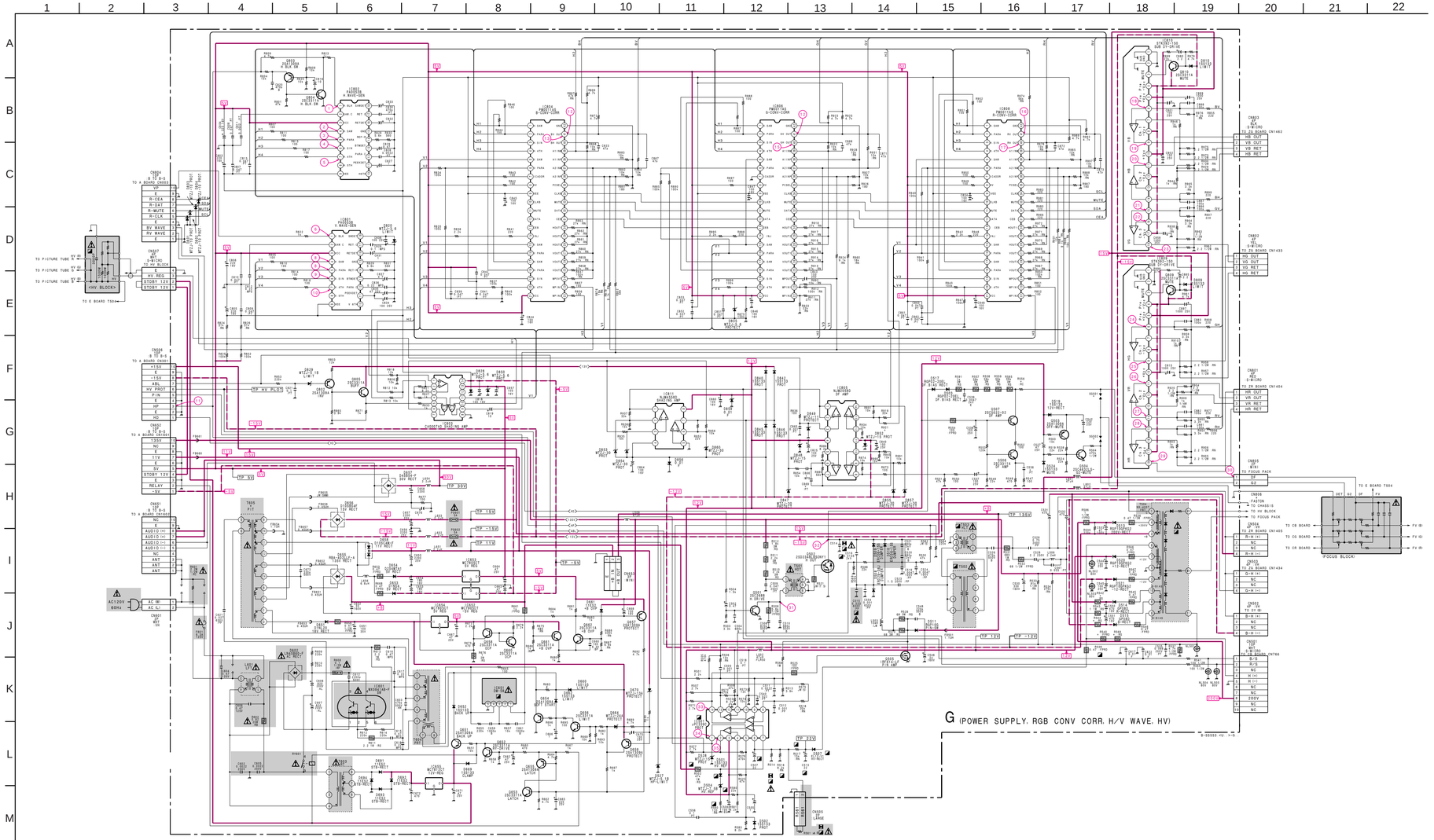


NOTE :
The circuit indicated as left contains hight voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

G [POWER SUPPLY, HV, RGB CONV, H/V WAVE GNE]

– G Board –





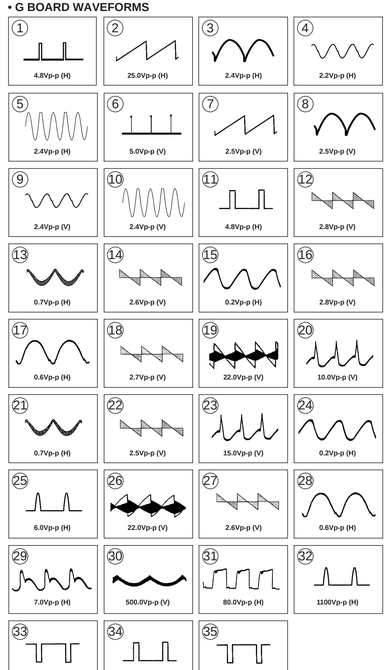
G BOARD IC VOLTAGE LIST

REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.
IC501	①	3.4	IC802	①	0.5	IC804	㉘	0	IC805	㉔	0
	②	0.7		②	1.1		㉙	0.5		㉕	0
	③	12.1		③	4.9		㉚	4.7		㉖	0
	④	3.3		④	0		㉛	0.1		㉗	0
	⑤	1.8		⑤	-0.9		㉜	4.9		㉘	0
	⑥	7.9		⑥	0		㉝	4.8		㉙	0.4
	⑦	8.1		⑦	-1.0		㉞	0		㉚	4.7
	⑧	1.4		⑧	-5.1		㉟	0		㉛	0.1
	⑨	2.2		⑨	0		㊱	0		㉜	4.9
	⑩	5.5		⑩	-0.9		㊲	0		㉝	4.8
	⑪	1.8		⑪	0.3		㊳	0		㉞	0
	⑫	GND		⑫	1.2		㊴	0		㉟	0
	⑬	1.4		⑬	GND		㊵	0.2		㊱	0
	⑭	9.9		⑭	-1.9		㊶	GND		㊲	0
●IC601	①	GND	IC803	①	1.2	IC806	①	7.2	IC808	㊳	0
	②	-1.9		②	-1.1		②	7.2		㊴	0
	③	136.0		③	-0.4		③	7.0		㊵	0.1
	④	274.0		④	-0.4		④	12.1		㊶	GND
	⑤	136.0		⑤	-0.3		⑤	0	IC809	①	GND
	⑥	134.0		⑥	-0.3		⑥	0		②	-0.9
	⑦	134.0		⑦	1.6		⑦	0		③	0
IC651	①	2.4		⑧	0.3		⑧	-0.8		④	-1.0
	②	13.8		⑨	GND		⑨	0		⑤	0
	③	GND		⑩	0		⑩	0		⑥	-0.4
	④	-11.5		⑪	0		⑪	-12.3		⑦	4.9
IC652	G	GND		⑫	0		⑫	0		⑧	4.9
	O	-5.1		⑬	4.9		⑬	0		⑨	-5.1
	I	10.6		⑭	-5.1		⑭	0.8		⑩	4.8
IC653	G	GND		⑮	0		⑮	0		⑪	4.9
	O	4.9		⑯	-0.9		⑯	-0.9		⑫	0.1
	I	18.0		⑰	0		⑰	0		⑬	4.7
IC654	G	GND		⑱	-1.0		⑱	-1.0		⑭	-2.1
	O	5.0		⑲	0		⑲	0		⑮	0
	I	15.7		⑳	-0.4		⑳	-0.4		⑯	-0.8
IC655	G	GND		㉑	-5.1		㉑	GND		⑰	0
	O	11.9		㉒	4.9		㉒	4.9		⑱	-0.9
IC801	①	0.2	IC804	①	-5.1	IC806	①	-5.1	IC810	⑲	0
	②	1.2		②	-2.2		②	4.8		⑳	-0.5
	③	4.9		③	0		③	4.9		㉑	4.9
	④	0		④	-0.8		④	0.1		㉒	0.1
	⑤	-0.8		⑤	0		⑤	4.7		㉓	0
	⑥	0		⑥	-0.9		⑥	-2.1		㉔	0
	⑦	-1.1		⑦	0		⑦	0		㉕	-0.5
	⑧	-5.1		⑧	-0.5		⑧	-0.8		㉖	0
	⑨	0.4		⑨	4.9		⑨	0		㉗	0
	⑩	-0.9		⑩	0		⑩	-0.9		㉘	0
	⑪	0.3		⑪	-0.1		⑪	0		㉙	0.2
	⑫	1.2		⑫	0		⑫	-0.5		㉚	0.2
	⑬	GND		⑬	-0.4		⑬	4.9		㉛	4.7
	⑭	-1.5		⑭	0		⑭	-0.4		㉜	0
	⑮	1.2		⑮	0		⑮	0		㉝	4.9
	⑯	-1.6		⑯	0		⑯	0		㉞	4.8

REF.	Pin NO.	VOL.
IC809	㉟	0
	㊱	0
	㊲	0
	㊳	0
	㊴	0.4
	㊵	-0.2
	㊶	0.4
	㊷	GND
	①	GND
	②	GND
	③	-14.3
	④	-15.3
	⑤	14.5
	⑥	-0.1
	⑦	-0.1
	⑧	-15.3
	⑨	-0.2
	⑩	14.5
	⑪	0.5
	⑫	-15.3
	⑬	0.3
	⑭	0.3
	⑮	-0.2
	⑯	-0.2
	⑰	-15.3
	⑱	-0.4
IC810	①	GND
	②	GND
	③	-14.5
	④	-15.3
	⑤	14.5
	⑥	0.2
	⑦	0.2
	⑧	-15.3
	⑨	0.3
	⑩	14.5
	⑪	0.1
	⑫	-15.3
	⑬	0
	⑭	0
	⑮	0.1
	⑯	0.1
	⑰	-15.3
	⑱	0.2
IC811	①	-1.2
	②	-0.3
	③	-0.3
	④	-12.3
	⑤	GND
	⑥	0
	⑦	0.6
	⑧	12.1

•All voltage are in V.
•Pin number which are not described are not used.
● : The figures in the parenthese are the voltage difference from primary side ground.

• G BOARD WAVEFORMS



G BOARD TRANSISTOR VOLTAGE LIST

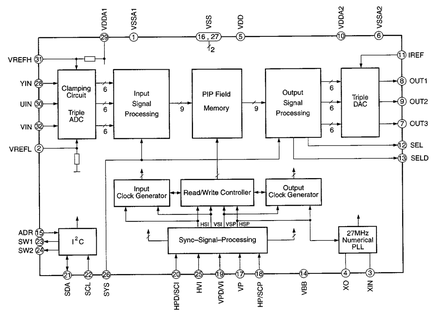
REF.		VOL.	REF.		VOL.
Q501	B	-0.4	Q656	B	0
	E	GND		E	GND
	C	47.0		C	13.6
Q502	B	4.9	Q657	B	4.9
	E	GND		E	4.9
	C	140.0		C	0
Q503	B	0.5	Q658	B	0.6
	E	2.4		E	0.4
	C	0		C	4.9
Q504	B	0	Q659	B	17.6
	E	GND		E	17.6
	C	0.5		C	0
Q505	D	9.9	Q660	B	0.8
	D	21.9		E	GND
	S	GND		C	0.6
Q506	B	1.7	Q661	B	3.1
	E	1.1		E	2.4
	C	11.3		C	5.2
Q507	B	12.1	Q662	B	2.7
	E	11.5		E	2.4
	C	780.0		C	4.9
Q651	B	11.2	Q802	B	4.0
	E	11.9		E	4.9
	C	11.9		C	2.3
Q652	B	0.7	Q805	B	2.3
	E	GND		E	1.7
	C	0		C	12.1
Q653	B	0	Q809	B	-15.3
	E	GND		E	-15.3
	C	1.7		C	-14.3
Q654	B	13.6	Q810	B	-15.3
	E	14.0		E	-15.3
	C	GND		C	-14.5
Q655	B	1.7			
	E	1.7			
	C	0			

All voltages are in V.

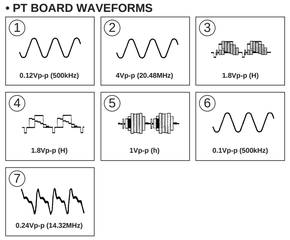
• G BOARD • MARK LIST

	KP-41T65/48S65/53S45/61S65	KP-46C65/53S65 (CND)	KP-53S65 (US)
C514	390PF 2KV :B	390PF 2KV :B	1000P 2KV :B
C536	0.033 : PT	0.033 : PT	0.047 : PT
C869	0.022 : PT	0.022 : PT	0.033 : PT
CN806	———	———	TAB (CONTACT)
R540	0.68	0.68	0.47
R542	68 1W : RS	150 1W : RS	150 1W : RS
R544	68 1W : RS	150 1W : RS	150 1W : RS
R556	33K 1/2W	33K 1/2W	100K 1/2W
R569	1.8 3W : RS	1.8 3W : RS	1.2 3W : RS
R921	10K	10K	15K
SG501	———	———	SPARK GAP
SG502	———	———	SPARK GAP
T605	PIT	PIT	PIT

PT BOARD : IC5052 SDA9288X-GEG



• PT BOARD WAVEFORMS



PT BOARD IC VOLTAGE LIST

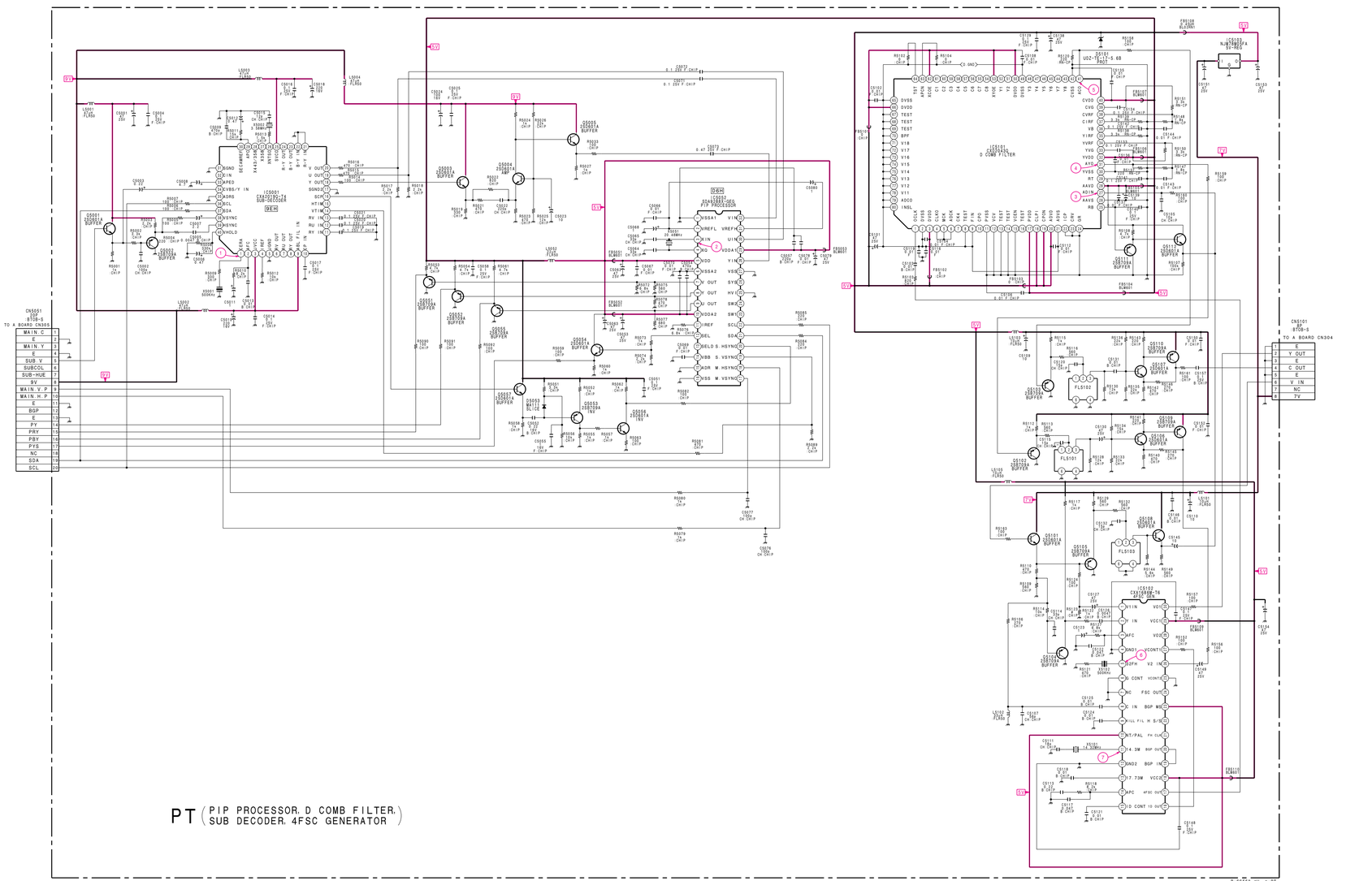
REF.	Pin NO.	VOL.	REF.	Pin NO.	VOL.
IC5001	①	2.3	IC5101	㉕	GND
	②	4.1		㉖	GND
	③	9.0		㉗	4.9
	④	0		㉘	4.9
	⑤	GND		㉙	4.9
	⑥	9.0		㉚	4.9
	⑦	1.0		㉛	GND
	⑧	4.6		㉜	GND
	⑨	0.1		㉝	GND
	⑩	0.7		㉞	GND
	⑪	GND		㉟	1.5
	⑫	2.8		㊱	4.9
	⑬	2.9		㊲	2.6
	⑭	2.9		㊳	GND
	⑮	GND		㊴	0.9
	⑯	GND		㊵	4.9
	⑰	9.0		㊶	2.9
	⑱	2.4		㊷	1.8
	⑲	4.5		㊸	1.8
	⑳	GND		㊹	0.9
	㉑	3.3		㊺	0
	㉒	3.6		㊻	0
	㉓	GND		㊼	0
	㉔	4.8		㊽	4.9
	㉕	4.8		㊾	0.9
	㉖	4.1		㊿	GND
	㉗	3.3		(51)	GND
	㉘	0.7		(52)	4.9
IC5052	①	GND		(53)	GND
	②	4.9		(54)	GND
	③	2.4		(55)	5.0
	④	2.2		(56)	0
	⑤	4.9		(57)	0.9
	⑥	GND		(58)	GND
	⑦	0.4		(59)	GND
	⑧	0		(60)	GND
	⑨	0.5		(61)	GND
	⑩	4.9		(62)	GND
	⑪	1.9		(63)	GND
	⑫	0		(64)	GND
	⑬	-3.0		(65)	GND
	⑭	GND		(66)	GND
	⑮	GND		(67)	GND
	⑯	0.1		(68)	GND
	⑰	0.7		(69)	GND
	⑱	0.1		(70)	GND
	⑲	0.5		(71)	GND
	⑳	4.8		(72)	GND
	㉑	4.8	IC5102	①	2.2
	㉒	GND		②	2.0
	㉓	GND		③	2.5
	㉔	1.6		④	1.1
	㉕	4.9		⑤	0
	㉖	2.2		⑥	4.8
	㉗	3.9		⑦	3.1
	㉘	2.2		⑧	4.4
IC5101	①	2.4		⑨	2.6
	②	GND		⑩	2.5
	③	4.9		⑪	4.0
	④	2.3		⑫	3.2
	⑤	2.3		⑬	3.9
	⑥	2.3		⑭	3.9
	⑦	GND		⑮	2.1
	⑧	GND		⑯	0
	⑨	GND		⑰	2.2
	⑩	GND			

•All voltage are in V.
•Pin numbers which are not described are not used.

PT BOARD TRANSISTOR VOLTAGE LIST

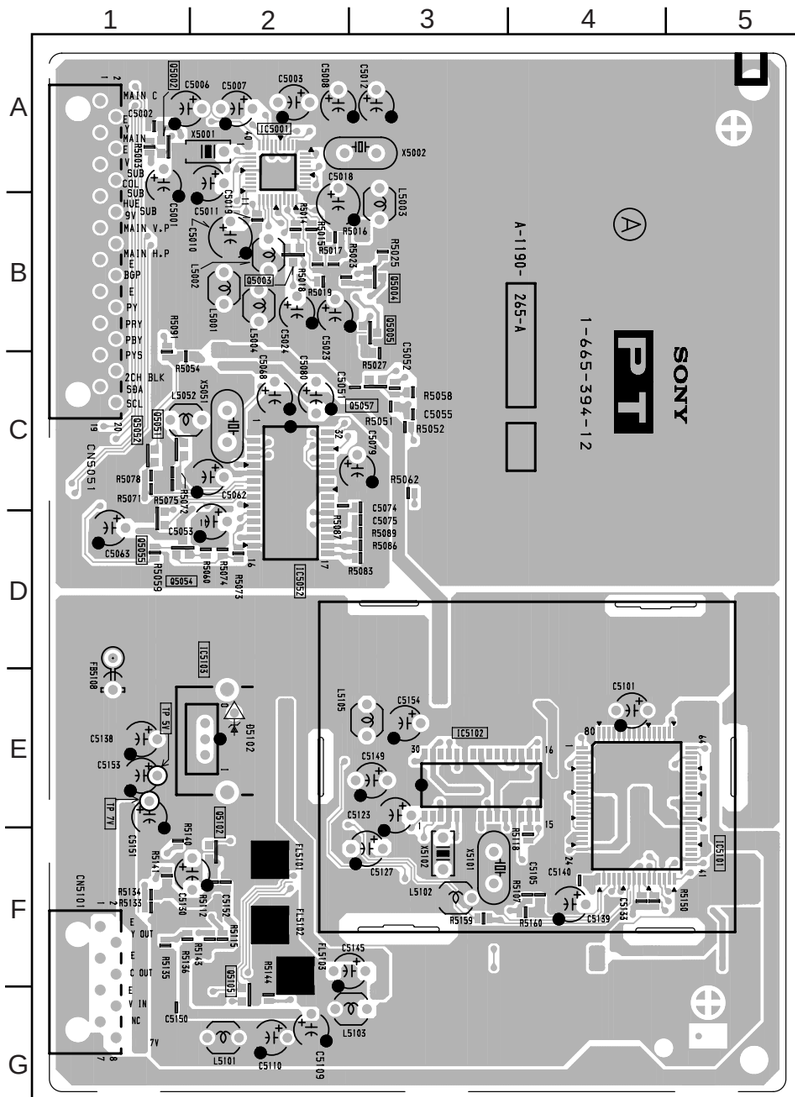
REF.		VOL.	REF.		VOL.
Q5001	B	6.5	Q5101	B	2.5
	E	5.8		E	1.9
	C	8.8		C	5.0
Q5002	B	5.8	Q5102	B	0.9
	E	6.5		E	1.8
	C	GND		C	GND
Q5003	B	2.8	Q5103	B	0.9
	E	2.2		E	1.6
	C	8.5		C	GND
Q5004	B	2.9	Q5104	B	0.8
	E	2.2		E	1.5
	C	4.1		C	GND
Q5005	B	4.1	Q5105	B	1.9
	E	3.5		E	2.6
	C	8.5		C	GND
Q5051	B	0.4	Q5106	B	2.4
	E	1.0		E	1.7
	C	GND		C	4.4
Q5052	B	0	Q5107	B	2.4
	E	0.5		E	1.7
	C	GND		C	4.4
Q5053	B	∞	Q5108	B	2.3
	E	∞		E	1.7
	C	∞		C	5.0
Q5054	B	0	Q5109	B	4.4
	E	0		E	5.0
	C	4.9		C	2.0
Q5055	B	0.5	Q5110	B	4.4
	E	1.1		E	5.0
	C	GND		C	2.0
Q5056	B	∞	Q5111	B	1.5
	E	∞		E	2.1
	C	∞		C	GND
Q5057	B	0	Q5112	B	2.1
	E	0		E	1.5
	C	4.9		C	4.9

All voltages are in V.

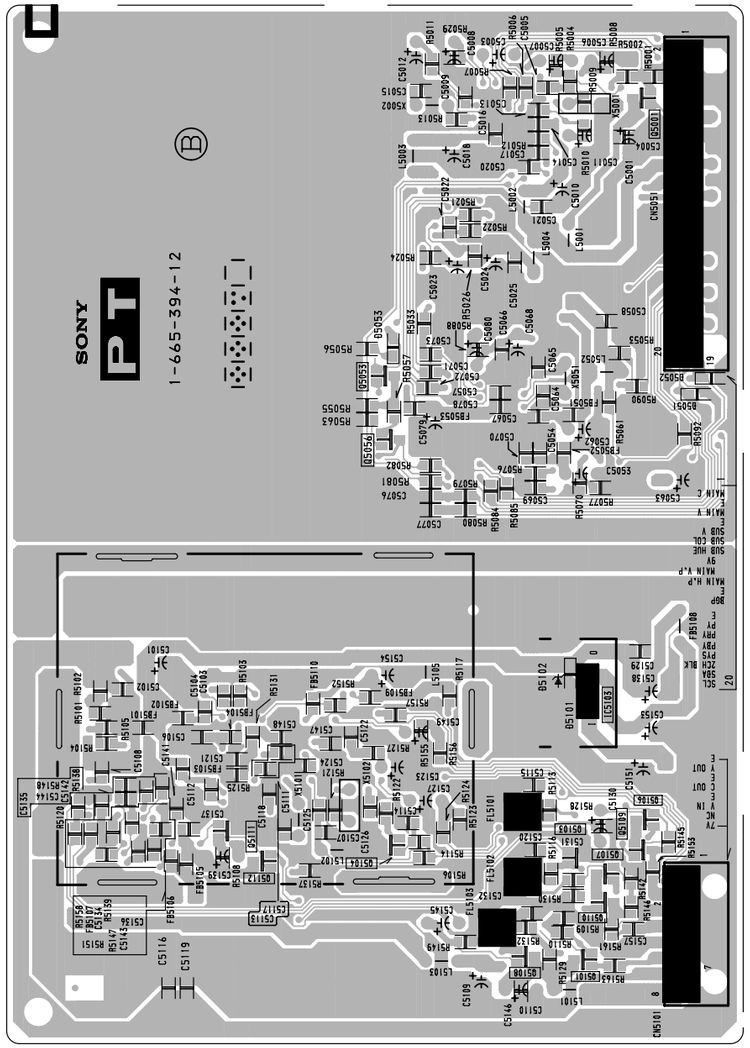


PT [DIGITAL COMB FILTER, PIP PROCESSOR, SUB DEC, 4FSC GNE]

– PT Board –



< Component Side >



< Conductor Side >

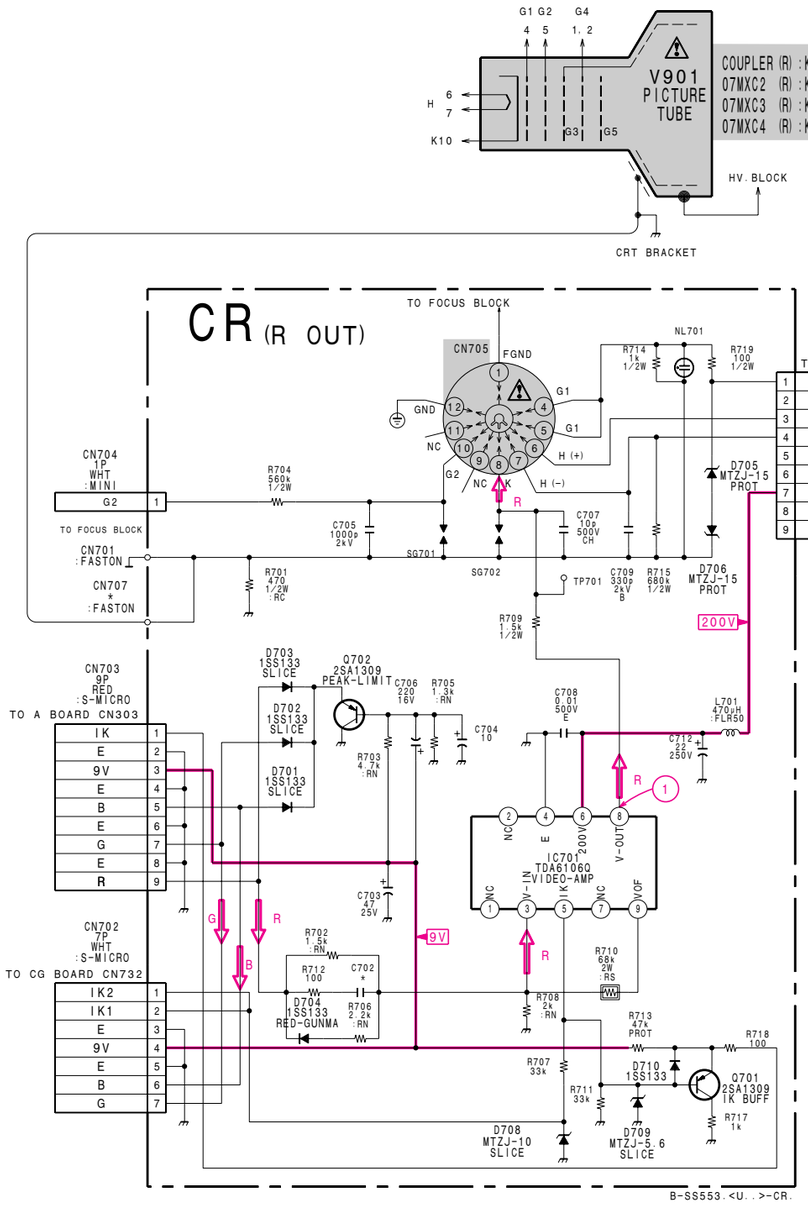
PT BOARD

DIODE		*
D5053	C-8	③
D5101	E-9	③

TRANSISTOR		*
Q5001	A-10	①
Q5002	A-1	②
Q5003	B-2	②
Q5004	B-3	②
Q5005	B-3	②
Q5051	C-1	②
Q5052	C-1	②
Q5053	C-8	①
Q5054	D-1	②
Q5055	D-1	②
Q5056	C-8	①
Q5057	C-3	②
Q5101	G-9	①
Q5102	F-2	②
Q5103	F-9	①
Q5104	F-8	①
Q5105	G-2	②
Q5106	F-10	①
Q5107	F-10	①
Q5108	G-9	①
Q5109	F-9	①
Q5110	F-9	①
Q5111	H-7	①
Q5112	H-7	①

IC	
IC5001	A-2
IC5052	C-2
IC5101	E-4
IC5102	E-3
IC5103	E-2, E-9

NOTE:
- ■ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side.



CR BOARD IC VOLTAGE LIST

REF.	Pin NO.	VOL.
IC701	③	2.6
	④	GND
	⑤	4.1
	⑥	196.5
	⑧	137.1
	⑨	135.0

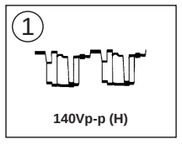
•All voltage are in V.
•Pin number which are not described are not used.

CR BOARD TRANSISTOR VOLTAGE LIST

REF.		VOL.
Q701	B	4.1
	E	4.4
	C	0
Q702	B	1.9
	E	2.2
	C	GND

All voltages are in V.

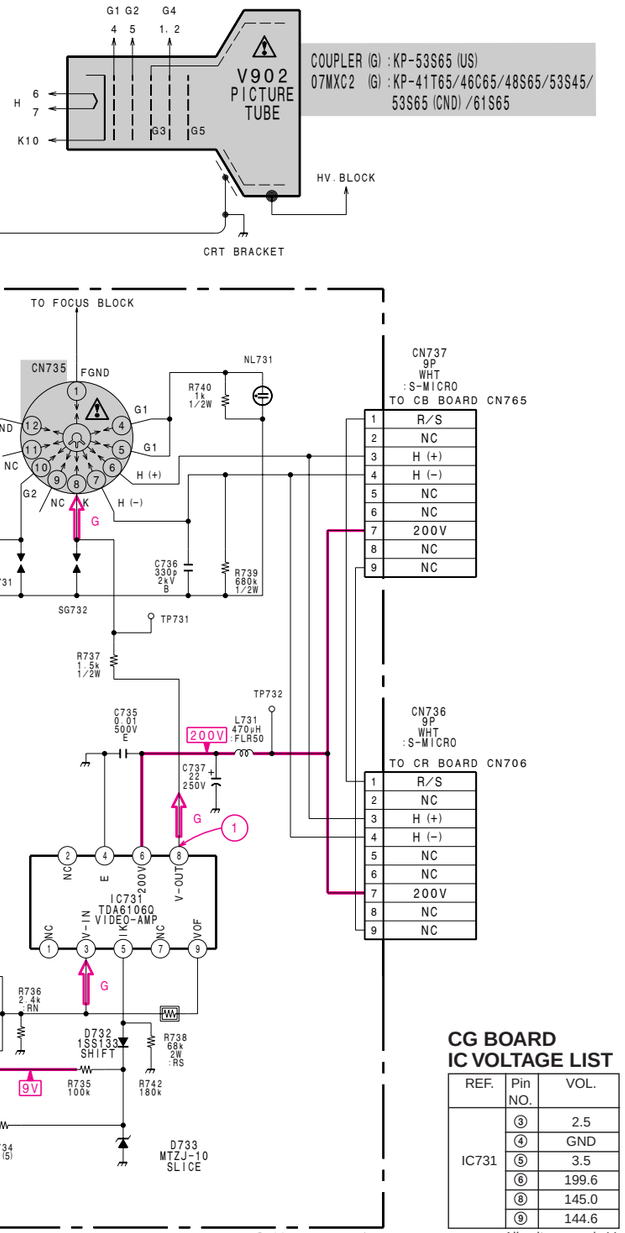
• CR BOARD WAVEFORM



• CR BOARD ∗ MARK LIST

	KP-41T65/48S65/53S45/61S65	KP-46C65/53S65 (CND)	KP-53S65 (US)
C702	22P	22P	22P
CN707	——	——	FASTON

Schematic diagram
← CR board

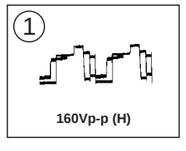


CG BOARD IC VOLTAGE LIST

REF.	Pin NO.	VOL.
IC731	③	2.5
	④	GND
	⑤	3.5
	⑥	199.6
	⑧	145.0
	⑨	144.6

•All voltage are in V.
•Pin number which are not described are not used.

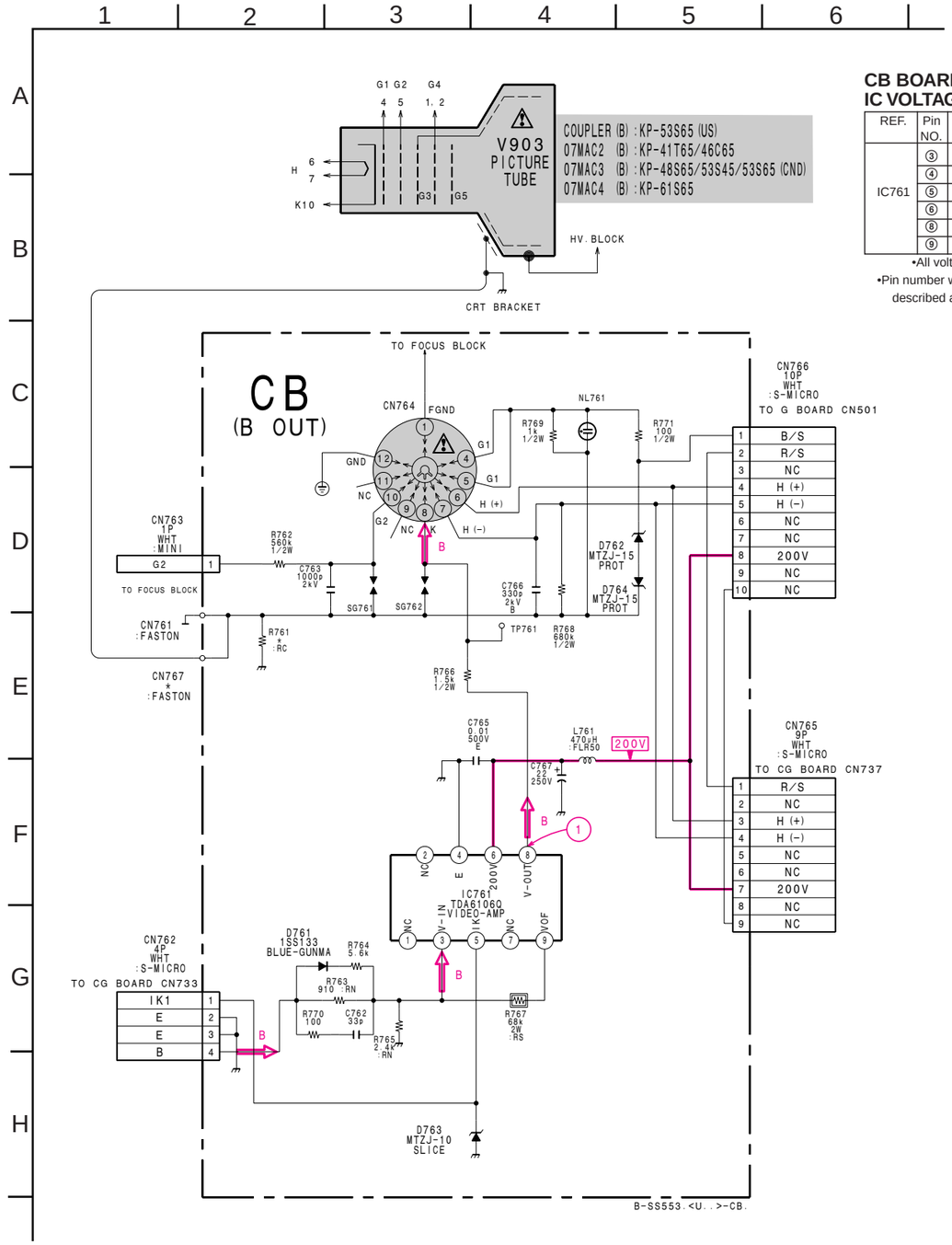
• CG BOARD WAVEFORM



• CG BOARD ∗ MARK LIST

	KP-41T65/48S65/53S45/61S65	KP-46C65/53S65 (CND)	KP-53S65 (US)
CN738	——	——	FASTON
R731	100 1/2W	100 1/2W	470 1/2W

Schematic diagram
CG board →

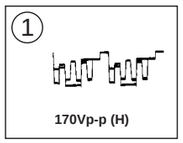


CB BOARD IC VOLTAGE LIST

REF.	Pin NO.	VOL.
IC761	③	2.5
	④	GND
	⑤	4.9
	⑥	199.6
	⑧	113.0
	⑨	109.7

•All voltage are in V.
•Pin number which are not described are not used.

• CB BOARD WAVEFORM

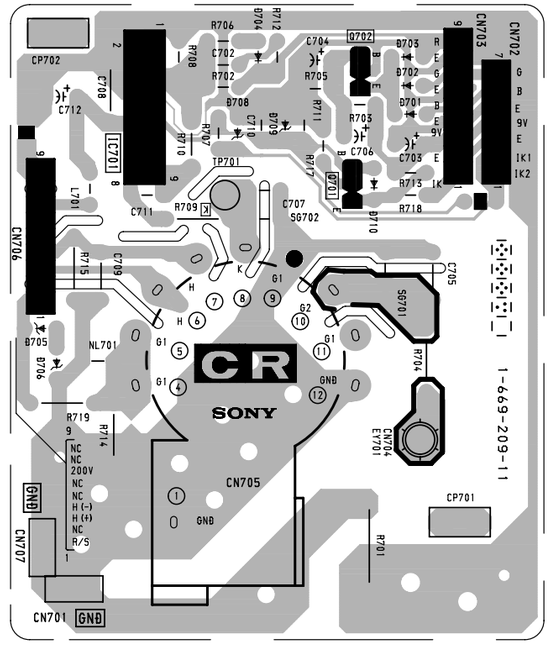


• CB BOARD ∗ MARK LIST

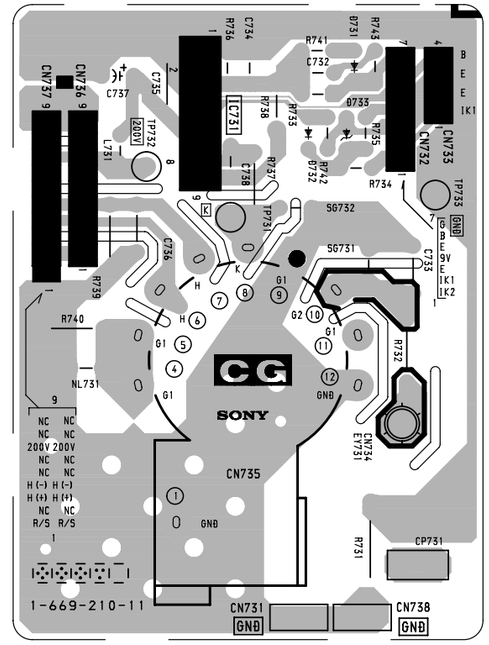
	KP-41T65/48S65/ 53S45/61S65	KP-46C65/53S65 (CND)	KP-53S65 (US)
CN767	——	——	FASTON
R761	100 1/2W	100 1/2W	470 1/2W

CR [R OUT] **CG** [G OUT] **CB** [B OUT]

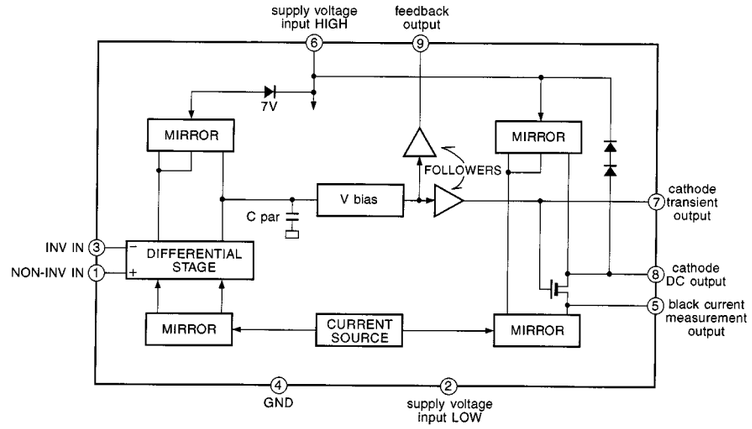
– CR Board –



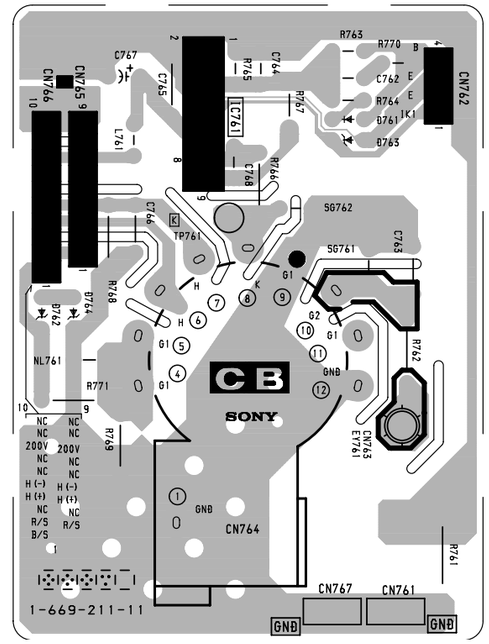
– CG Board –



CR BOARD : IC701 TDA6106Q
CG BOARD : IC701 TDA6106Q
CB BOARD : IC701 TDA6106Q



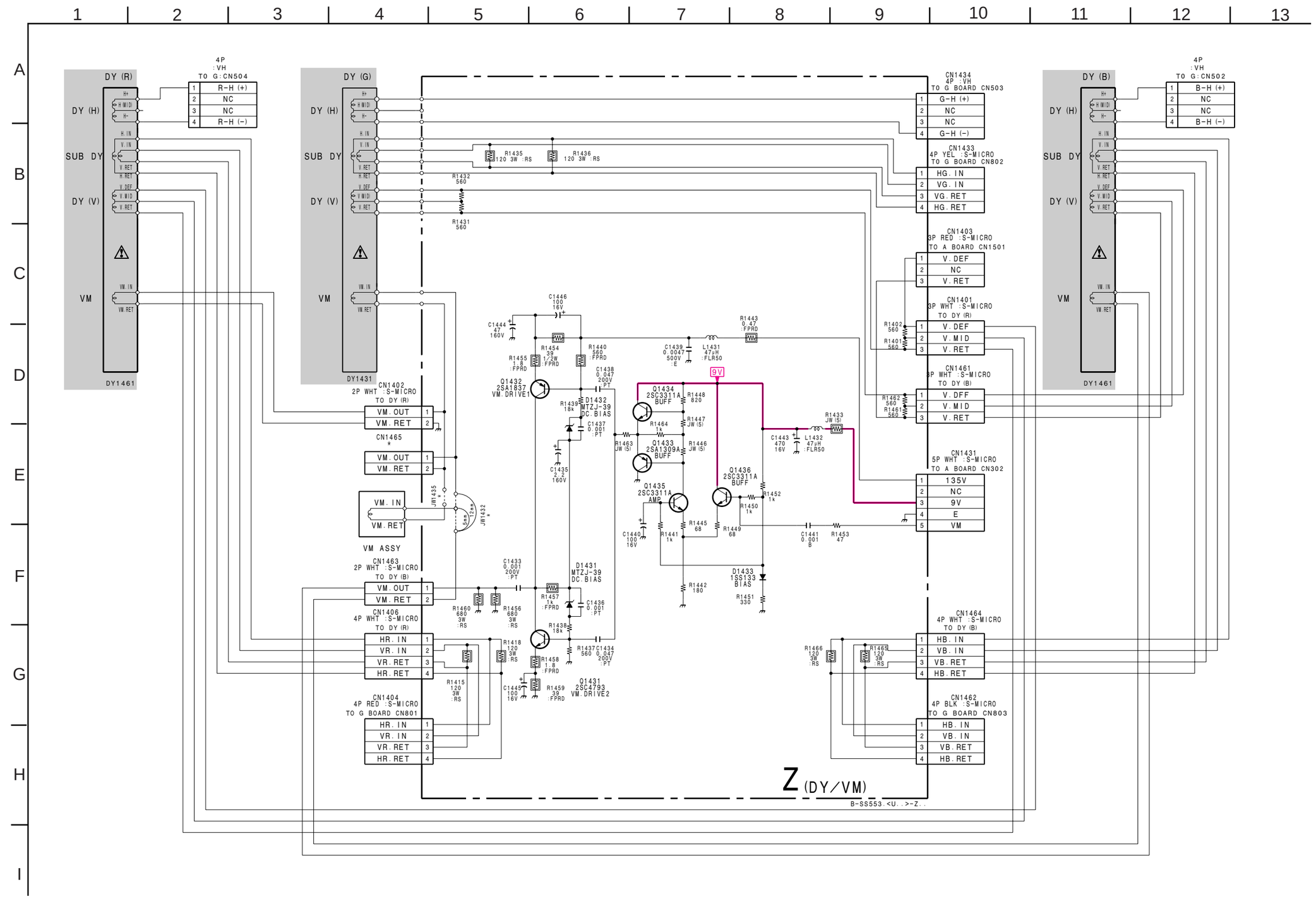
– CB Board –



Z BOARD TRANSISTOR VOLTAGE LIST

REF.		VOL.
Q1431	B	0.9
	E	0.5
	C	67.2
Q1432	B	134.4
	E	138.4
	C	67.2
Q1433	B	5.7
	E	5.8
	C	GND
Q1434	B	5.7
	E	5.8
	C	9.0
Q1435	B	2.7
	E	2.1
	C	5.7
Q1436	B	2.7
	E	2.1
	C	9.0

All voltages are in V.

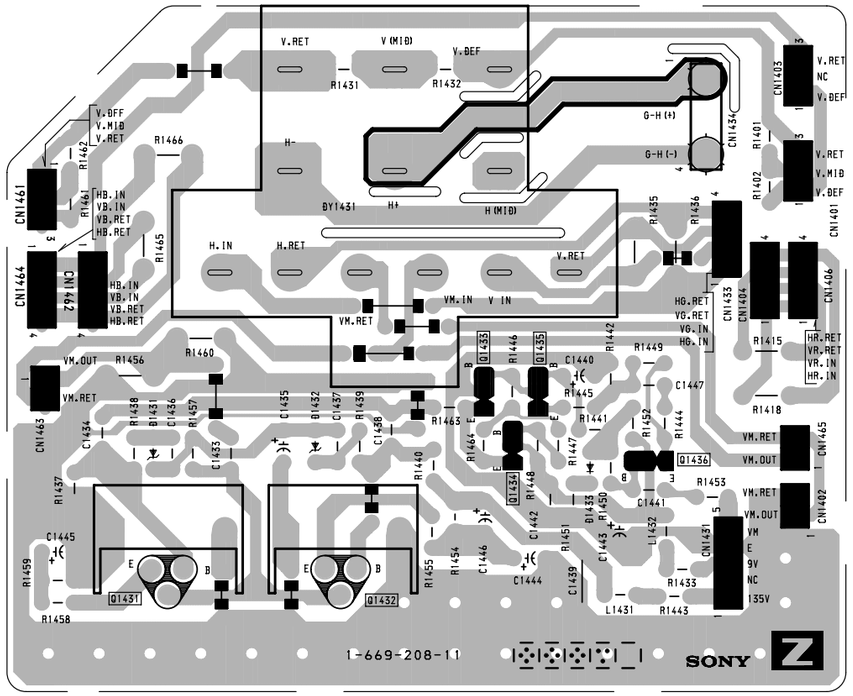


Schematic diagram
← CB board

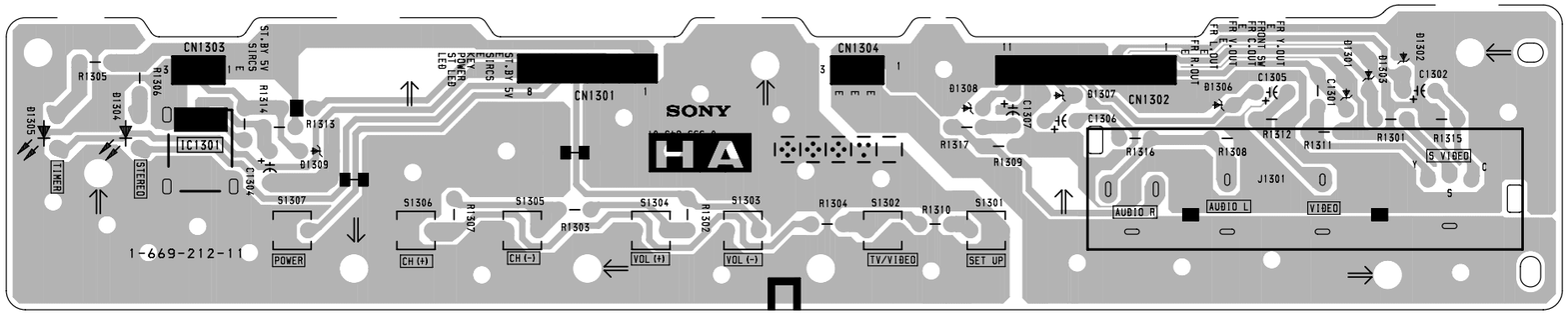
Schematic diagram
Z board →

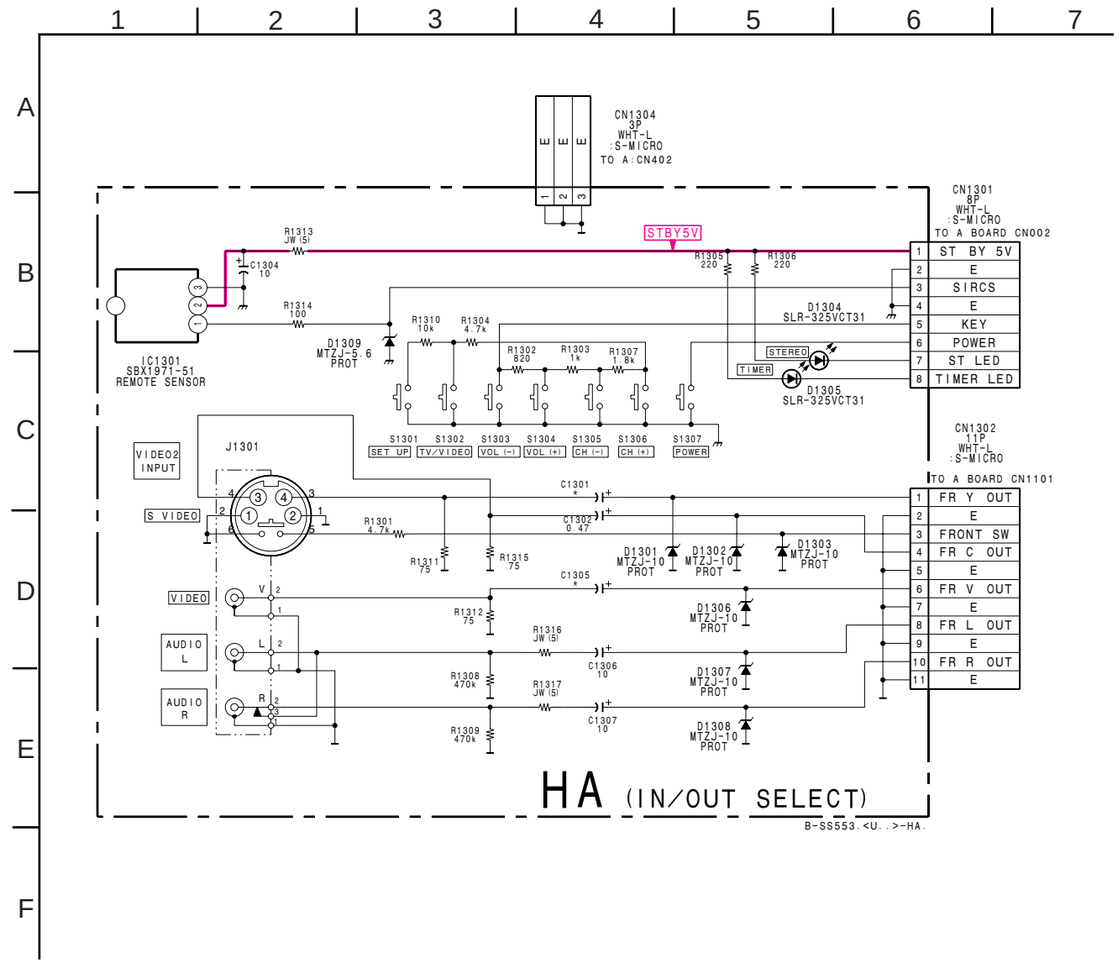
Z [VM, DY] **HA** [IN / OUT SELECT]

– Z Board –



– HA Board –





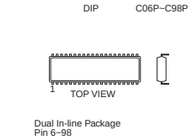
HA BOARD
IC VOLTAGE LIST

REF.	Pin NO.	VOL.
IC1301	①	5.0
	②	5.0
	③	GND

•All voltage are in V.

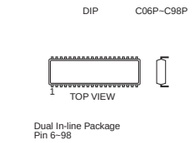
6-5. SEMICONDUCTORS

BH3856FS-E2



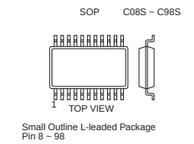
32pin

CA0007AM
CA0007AD
NJM2058D
UPC339C



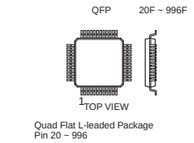
14pin

CXA1686M



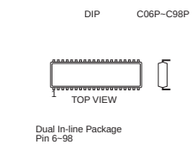
30pin

CXA2019Q



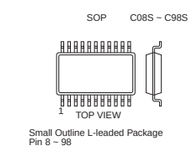
40pin

CXA2025AS



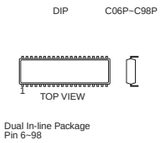
48pin

CXD2043Q



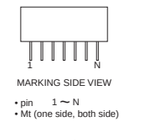
Schematic diagram
HA board

CXP85112B-613S
CXP85856A-009S



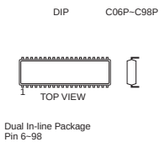
64pin

DM-58



5pin

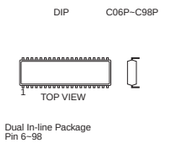
MM1313AD
PM0011AS



42pin

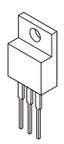
MX0841AB-F

PA0053B

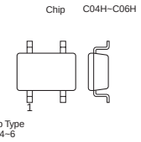


18pin

PQ09RF21
TA7805S
TA7812S

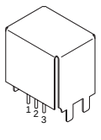


PST9143NL

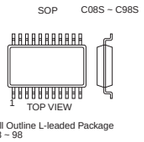


5pin

SBX1971-51

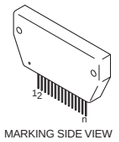


SDA9288X-A141



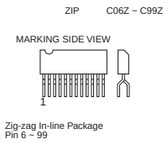
32pin

STK392-150



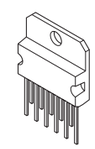
18pin

TDA6106Q

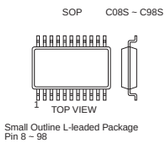


9pin

TDA7162

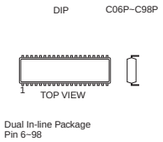


UPC4558G2



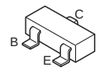
8pin

M5218AP
X24C04S8

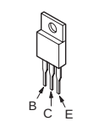


8pin

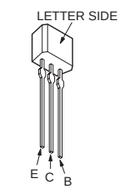
DTA144EKA-T146
DTC143TKA-T146
DTC144EKA
2SA1162-G
2SD601A-S



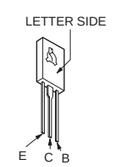
IRF614
2SA1837
2SC4793



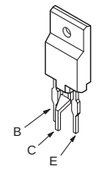
2SA1175-HFE
2SC2785-HFE



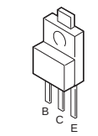
2SC2688-LK



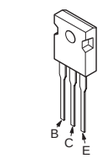
2SC4632LS-CB7



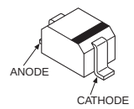
2SC5022-02



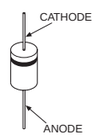
2SD2348 (LBSONY)



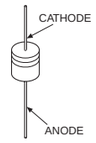
DTZ10B
MA111
RD5.6S-B



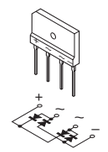
D1NL20
EL1Z
GP08D
RGP02-20EL-6394



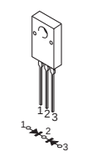
D1NS4
HZS9.1NB2
MTZJ-T-77-15
MTZJ-T-77-36B
MTZJ-13
MTZJ-30A
MTZJ-33B
MTZJ-7.5B
RD10ESB2
RD11ES-B2
RD24ES-B1
RD3.6ES-B1
RD39ES-B2
RD5.1ES-B2
RD5.6ESB2
11ES2



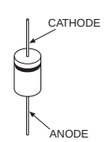
D10SBS4F
D4SBS4-FA
LN4SB60
RBA-402LLF-AA



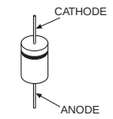
D10SC4M



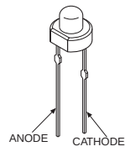
D2S4M



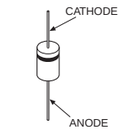
ERC06-15S
ERD29-08J



SLR-325VCT31



1SS133T-77



SECTION 7
EXPLODED VIEWS

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

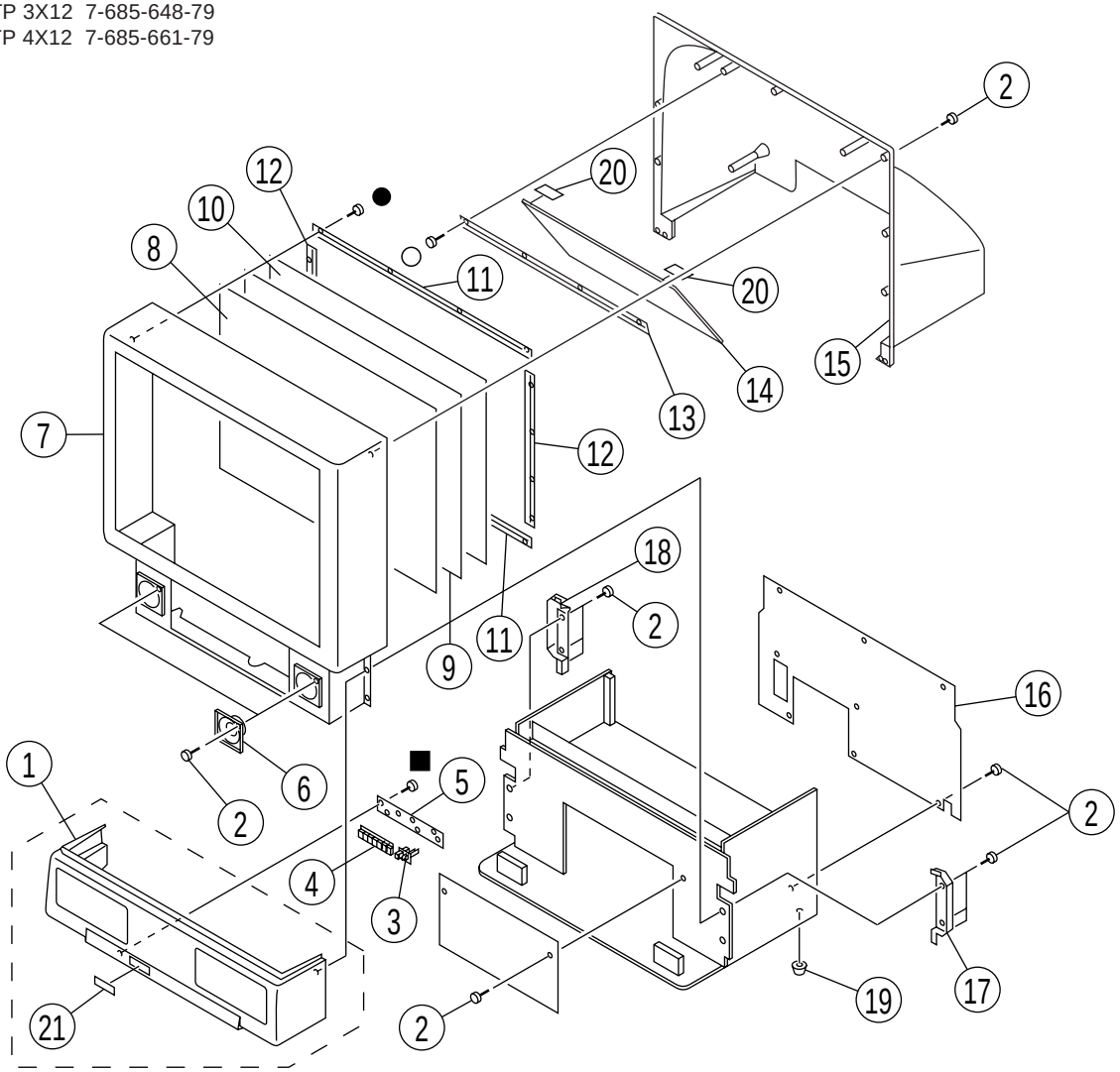
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

7-1. COVER (KP-41T65)

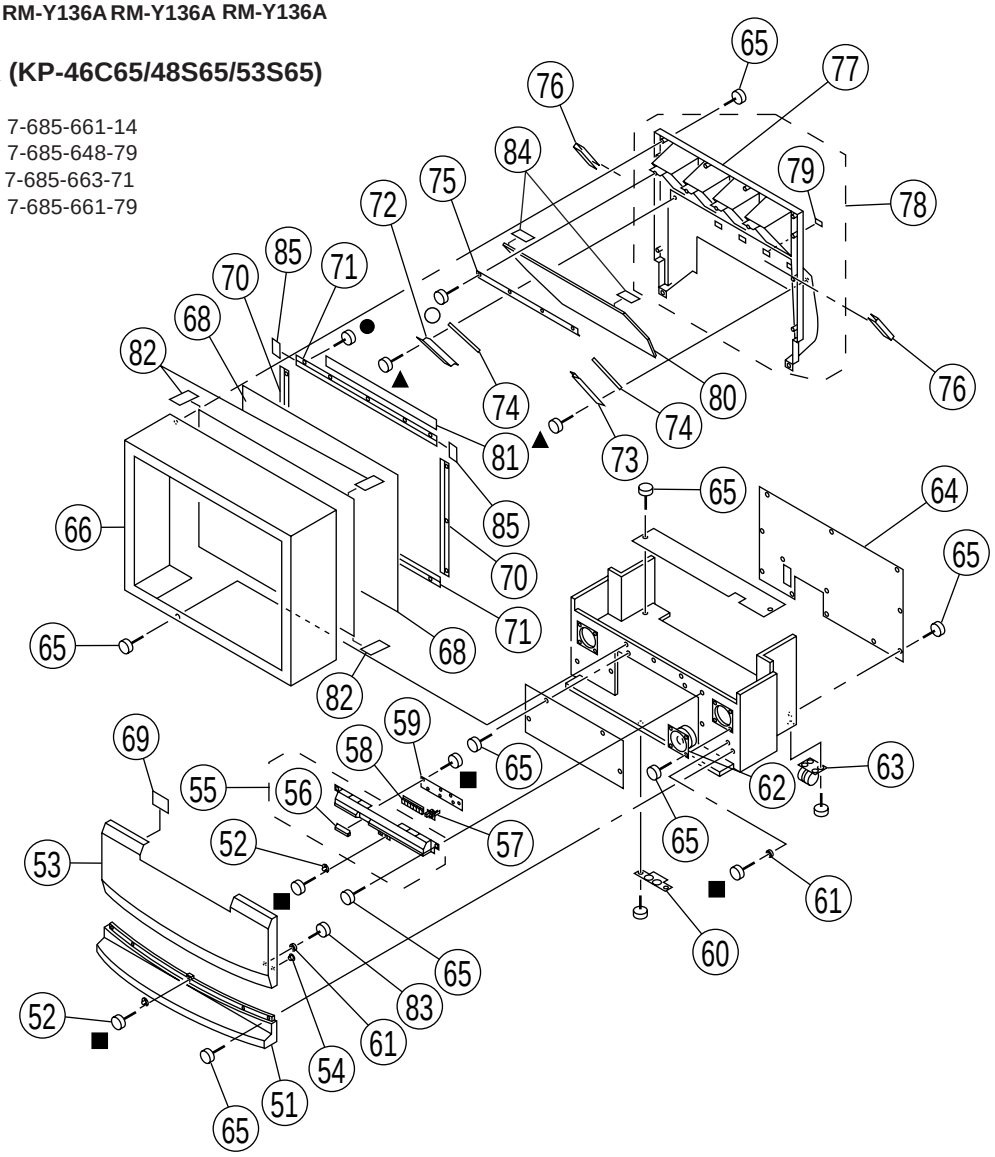
● : +BVTP 4X12 7-685-661-14
■ : +BVTP 3X12 7-685-648-79
○ : +BVTP 4X12 7-685-661-79



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4034-531-1	CONTROL PANEL ASSY (PTG) (41)	21
2		4-378-522-31	SCREW (4X20), TAPPING	
3		4-057-604-01	GUIDE, LED/IR	
4		4-057-603-01	BUTTON, MULTI	
5	*	A-1372-474-A	HA BOARD, COMPLETE	
6		1-505-748-11	SPEAKER (10CM)	
7		X-4035-742-1	BEZNET ASSY (41)	
8	*	4-064-338-11	PLATE (L), DIFFUSION	
9	*	4-064-339-11	PLATE (F), DIFFUSION	
10	*	4-064-340-01	SCREEN (41), CONTRAST	
11	*	4-059-007-01	HOLDER, SCREEN	
12	*	4-059-011-01	HOLDER, SCREEN	
13	*	4-037-351-01	HOLDER, MIRROR	
14		4-047-861-01	MIRROR (41), REFLECTION	
15		X-4032-607-1	COVER, MIRROR	
16	*	4-059-014-01	BOARD (41), REAR	
17		4-057-601-01	CAP (RIGHT) (41), CONTROL PANEL	
18		4-057-600-01	CAP (LEFT) (41), CONTROL PANEL	
19		4-057-611-01	FOOT	
20		7-600-003-52	BLACK ACETATE (2142) 46x50M	
21		4-057-605-01	DOOR, CONTROL	

7-2. COVER (KP-46C65/48S65/53S65)

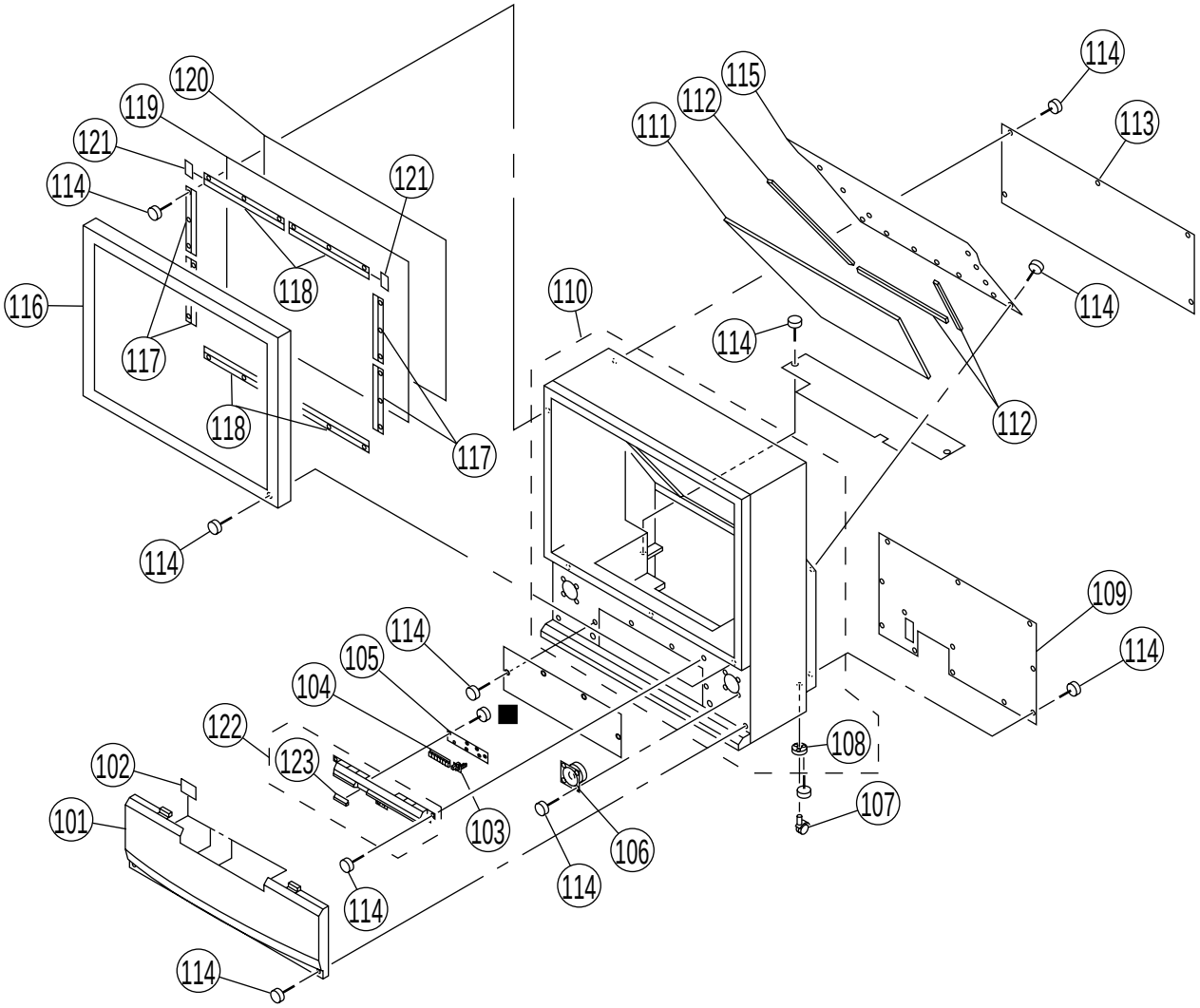
● : +BVTP 4X12 7-685-661-14
■ : +BVTP 3X12 7-685-648-79
▲ : +BVTP 4X16 7-685-663-71
○ : +BVTP 4X12 7-685-661-79



REF. NO.		PART NO.	DESCRIPTION	REMARK
51		4-057-608-01	SKIRT, FRONT (KP-46C65)	
52		4-843-806-00	STRIKE (KP-46C65)	
53		X-4034-457-1	GRILLE ASSY, SPEAKER (KP-46C65)	
		X-4035-410-1	GRILLE ASSY, SPEAKER (KP-48S65/53S65)	
54		4-838-438-00	LATCH (KP-46C65)	
55		X-4034-456-1	PANEL ASSY, CONTROL (KP-46C65)	56
56		4-057-605-01	DOOR, CONTROL	
57		4-057-604-01	GUIDE, LED/IR	
58		4-057-603-11	BUTTON, MULTI	
59	*	A-1372-474-A	HA BOARD, COMPLETE	
60		4-048-175-01	FOOT, PLASTIC	
61		4-058-745-02	VELCRO (KP-46C65)	
62		1-505-378-11	SPEAKER (10CM)	
63		4-040-755-01	CASTER (DIA.30)	
64	*	4-057-844-01	BOARD (53), REAR (KP-53S65)	
	*	4-058-556-01	BOARD (48), REAR (KP-48S65)	
	*	4-058-648-01	BOARD (46), REAR (KP-46C65)	
65		4-378-522-31	SCREW (4X20), TAPPING	
66		X-4034-438-1	BEZNET ASSY (48) (KP-48S65)	
		X-4035-743-1	BEZNET ASSY (53V) (KP-53S65)	
		X-4035-744-1	BEZNET ASSY (46) (KP-46C65)	
67		4-063-555-01	PLATE (L), DIFFUSION (KP-53S65)	
		4-063-566-01	PLATE (L), DIFFUSION (KP-48S65)	
		4-063-603-11	PLATE (L), DIFFUSION (KP-46C65)	
68		4-057-324-11	PLATE (F), DIFFUSION (KP-46C65)	
		4-058-455-11	PLATE (F), DIFFUSION (KP-48S65)	
		4-059-221-11	PLATE (F), DIFFUSION (KP-53S65)	
69		4-059-346-01	CUSHION, GRILLE	
70	*	4-048-152-01	HOLDER (S), SCREEN (KP-46C65/48S65)	
	*	4-048-152-11	HOLDER (S), SCREEN (KP-53S65)	
71	*	4-048-159-01	HOLDER (L), SCREEN (KP-46C65/48S65)	
	*	4-048-159-11	HOLDER (L), SCREEN (KP-53S65)	
72	*	4-051-790-02	HOLDER, MIRSD (L)	
73	*	4-051-789-02	HOLDER, MIRSD (R)	
74	*	4-049-098-01	CUSHION	
75	*	4-037-351-01	HOLDER, MIRROR	
76		4-033-775-41	PROTECTOR, MIRROR (KP-53S65)	
77	*	4-057-610-01	COVER, MIRROR (KP-48S65)	
78	*	X-4032-619-1	COVER ASSY, MIRROR (KP-46C65)	79
	*	X-4032-620-1	COVER ASSY, MIRROR (KP-53S65)	79
79		4-048-150-01	CAP, HOLE (KP-46C65/53S65)	
80		4-048-181-01	MIRROR (53), REFLECTION (KP-53S65)	
		4-048-182-01	MIRROR (46), REFLECTION (KP-46C65)	
		4-058-545-01	MIRROR (48), REFLECTION (KP-48S65)	
81	*	4-060-132-01	CUSHION, SCREEN HOLDER (KP-48S65)	
82		7-632-661-51	BLACK ACETATE (2142) 23X50M	
83		4-061-050-11	SCREW, PAN HEAD TAPPING (3X16)(KP-46C65)	
84		7-600-003-52	BLACK ACETATE (2142) 23X50M	
85		7-600-004-57	TAPE, SCREEN (12X50M) NTR	

7-3. COVER (KP-61S65)

■ : +BVTP 3X12 7-685-648-79



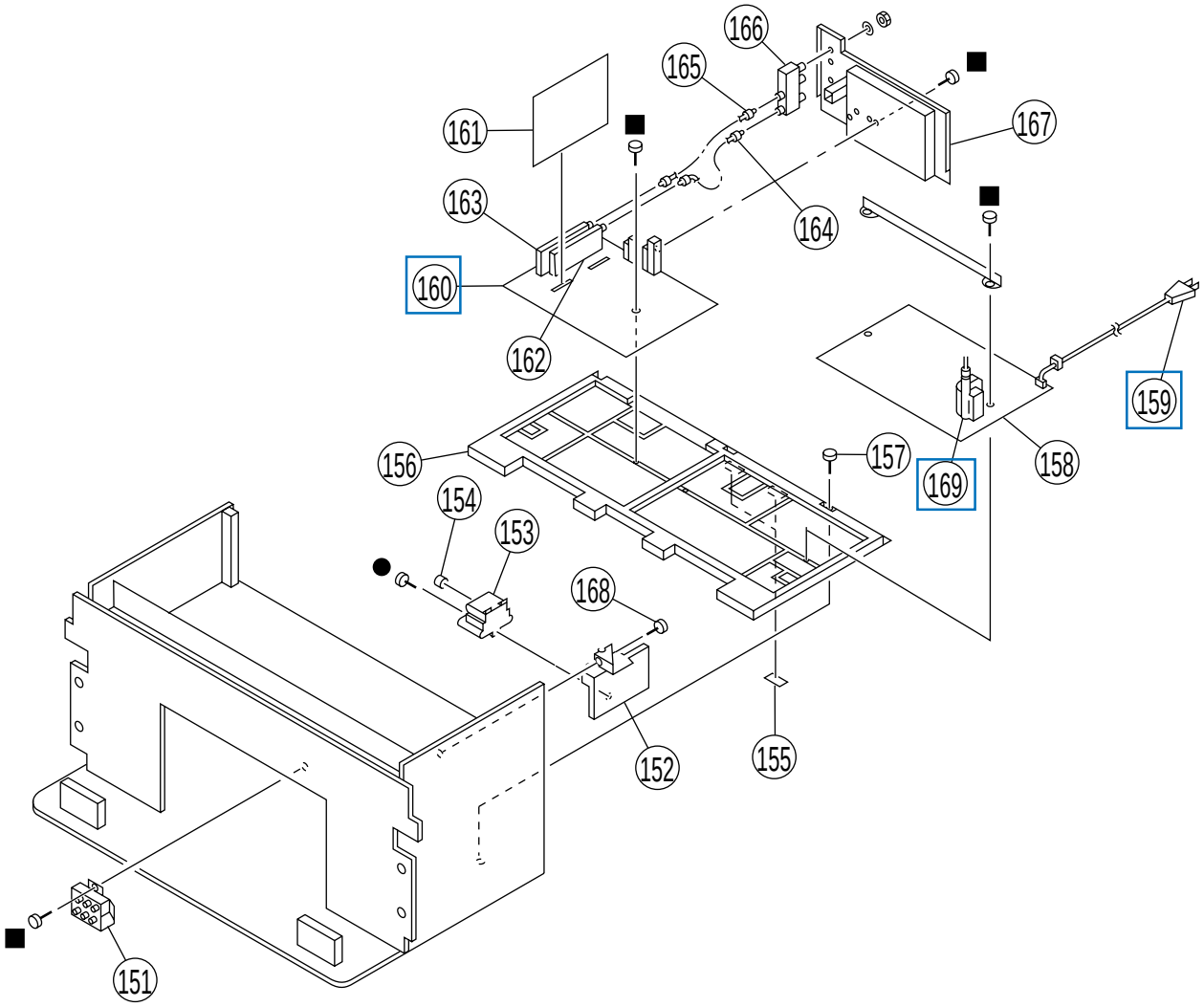
REF. NO.		PART NO.	DESCRIPTION	REMARK
101		X-4035-408-1	GRILLE ASSY, SPEAKER	
102		4-060-556-01	CUSHION GRILLE	
103		4-057-604-01	GUIDE, LED/IR	
104		4-057-603-01	BUTTON, MULTI	
105	*	A-1372-474-A	HA BOARD, COMPLETE	
106		1-505-378-11	SPEAKER (10CM)	
107		4-040-508-01	CASTER	
108		4-030-850-01	SOCKET, CASTER	
109	*	4-058-640-01	BOARD, REAR	
110		X-4035-418-1	CABINET ASSY	108
111		A-058-643-01	MIRROR (61), REFLECTION	
112		4-059-099-01	FORM, SPACER	
113	*	4-058-641-01	COVER, TOP REAR	
114		4-378-522-31	SCREW (4X20), TAPPING	
115	*	4-058-642-01	BOARD, MIRROR	
116		X-4032-762-1	FRAME ASSY, SCREEN	
117		4-040-122-01	HOLDER (S), SCREEN	
118		4-040-120-01	HOLDER (L), SCREEN	
119		4-063-551-01	PLATE (L), DIFFUSION	
120		4-064-092-01	PLATE (F), DIFFUSION	
121		7-600-004-57	TAPE, SCREEN (12X50M) NTR	
122		X-4034-499-1	PANEL ASSY, CONTROL	
123		4-057-605-01	DOOR, CONTROL	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

7-4. CHASSIS (KP-41T65)

● : +BVTP 4X12 7-685-661-14
■ : +BVTP 3X12 7-685-648-79



REF. NO.		PART NO.	DESCRIPTION	REMARK
151	⚠	1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
152	*	4-057-596-01	BRACKET, HV	
153	⚠	8-598-955-30	BLOCK ASSY, HIGH-VOLTAGE	
154		4-373-137-01	CAP (Z), RUBBER	
155		3-551-305-21	CUSHION, PANEL	
156	*	4-057-594-01	BRACKET, MAIN	
157		4-052-894-01	SCREW (4X20), HEAD TAPPING	
158	*	A-1316-367-A	G BOARD, COMPLETE	
159	⚠	1-769-837-11	CORD, POWER (WITH NOISE FILTER)	
160	*	A-1298-448-A	A BOARD, COMPLETE	
161	*	A-1190-265-A	PT BOARD, COMPLETE	

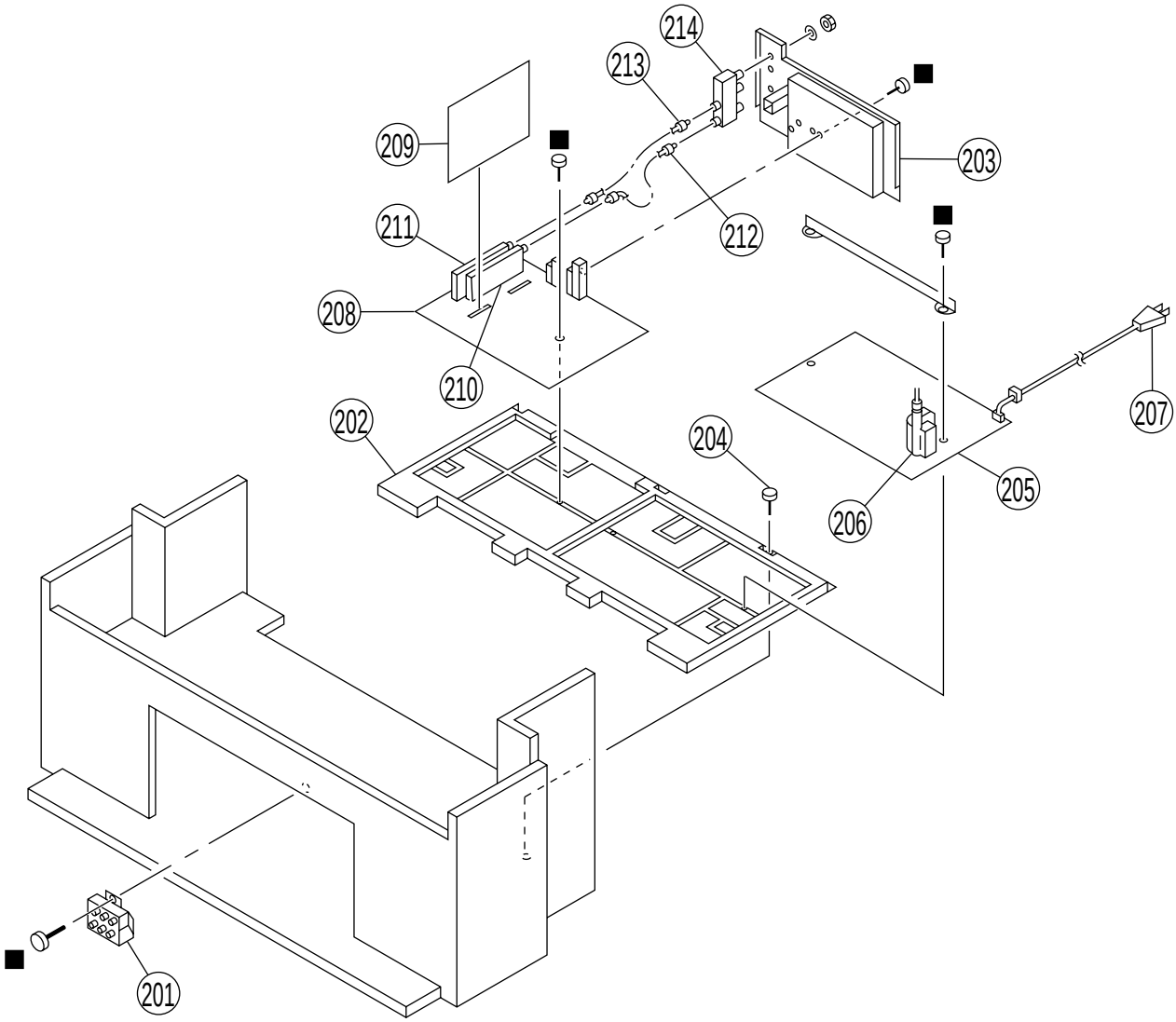
REF. NO.		PART NO.	DESCRIPTION	REMARK
162	⚠	8-598-339-00	TUNER BTF-LA402	
163	⚠	8-598-340-00	TUNER BTF-WA404	
164	*	1-557-056-31	CABLE, P-P	
165		1-556-945-21	CABLE, P-P	
166		8-598-414-00	ANTENNA SWITCH AS-2F	
167		4-057-595-21	TERMINAL BOARD	
168		4-378-522-31	SCREW (4X20), TAPPING	
169	⚠	1-453-238-11	TRANSFORMER ASSY, FLYBACK (NX-4007//X4A4)	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

7-5. CHASSIS (KP-46C65/48S65/53S65/61S65)

■ : +BVTP 3X12 7-685-648-79



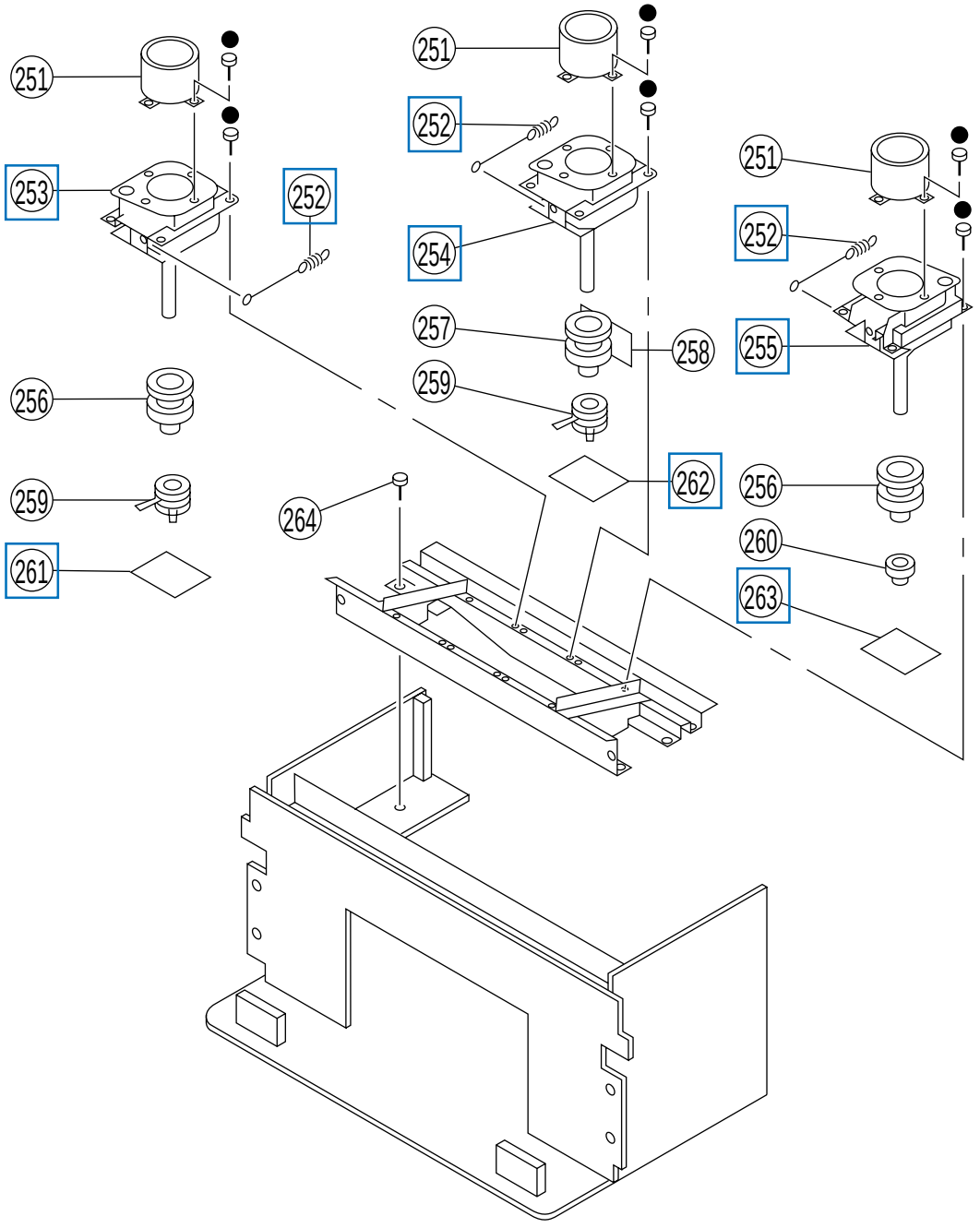
REF. NO.		PART NO.	DESCRIPTION	REMARK
201	⚠	1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
202	*	4-057-594-01	BRACKET, MAIN	
203		4-057-595-21	TERMINAL BOARD	
204		4-052-894-01	SCREW (4X20), HEAD TAPPING	
205	*	A-1316-365-A	G BOARD, COMPLETE (KP-46C65/53S65 (US (N65A-A), CND))	
	*	A-1316-367-A	G BOARD, COMPLETE (KP-41T65/48S65/61S65)	
	*	A-1316-379-A	G BOARD, COMPLETE (KP-53S65(US (N65A-B)))	
206	⚠	1-453-238-11	TRANSFORMER ASSY, FLYBACK (NX/4007//X4A4)	
207	⚠	1-769-837-11	CORD, POWER (WITH NOISE FILTER)	
208	*	A-1298-448-A	A BOARD, COMPLETE	
209	*	A-1190-265-A	PT BOARD, COMPLETE	
210	⚠	8-598-339-00	TUNER BTF-LA402	
211	⚠	8-598-340-00	TUNER BTF-WA404	
212	*	1-557-056-31	CABLE, P-P	
213		1-556-945-21	CABLE, P-P	
214		8-598-414-00	ANTENNA SWITCH AS-2F	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

7-6. PICTURE TUBE (KP-41T65)

● : +BVTP 4X12 7-685-661-14



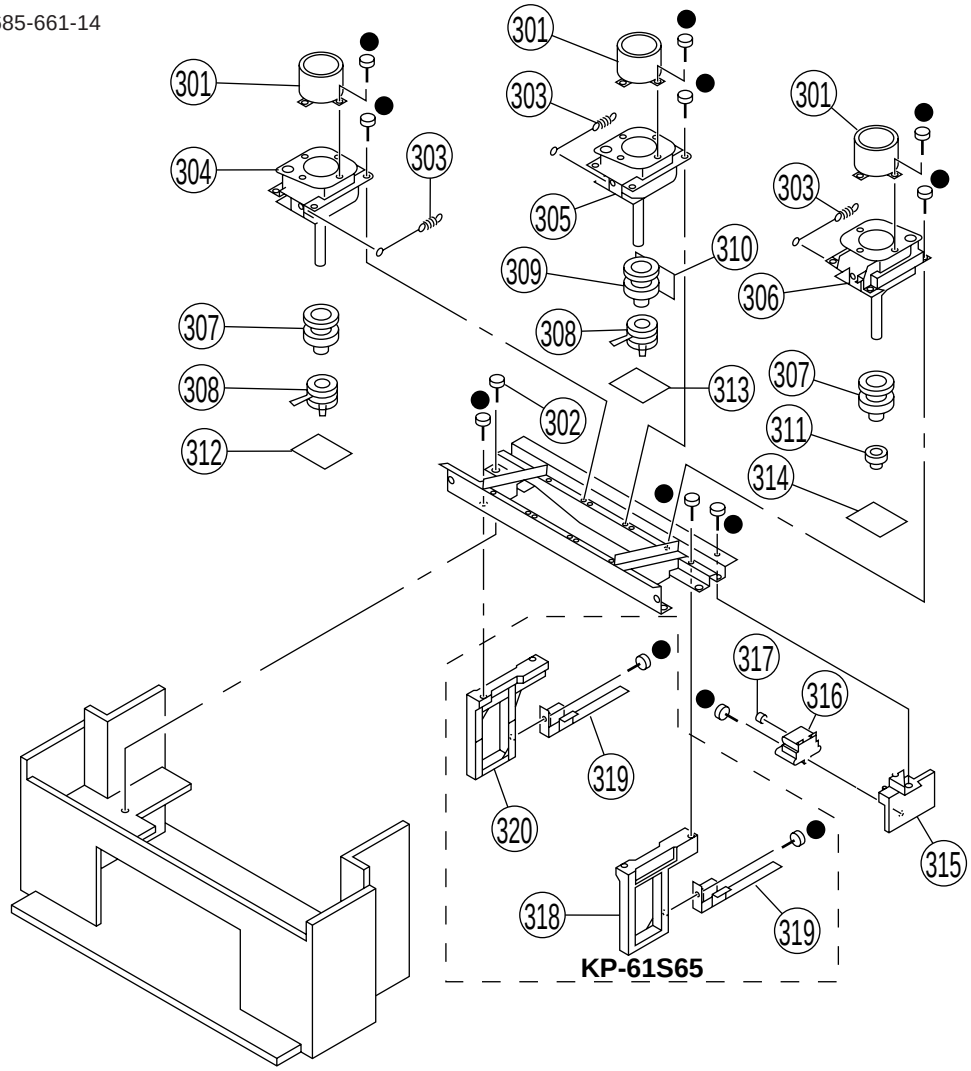
REF. NO.	PART NO.	DESCRIPTION	REMARK
251	4-056-258-01	LENS (DELTA 78)	
252	4-048-142-01	SPRING, TENSION	
253	⚠ 8-733-539-05	PICTURE TUBE 07MXC2 (R)	
254	⚠ 8-733-537-05	PICTURE TUBE 07MXC2 (G)	
255	⚠ 8-733-519-05	PICTURE TUBE 07MAC2 (B)	
		(GROUND SPRING)	
256	⚠ 1-451-455-31	DEFLECTION YOKE (R) (B)	
257	⚠ 1-451-455-11	DEFLECTION YOKE (G)	
258	* A-1390-867-A	Z BOARD, COMPLETE	
259	⚠ 1-452-790-21	NECK ASSY	
260	1-452-909-31	MAGNET ASSY, 4 POLE	
261	* A-1331-777-A	CR BOARD, COMPLETE	
262	* A-1331-778-A	CG BOARD, COMPLETE	
263	* A-1331-779-A	CB BOARD, COMPLETE	
264	4-052-894-01	SCREW (4X20), HEAD TAPPING	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

7-7. PICTURE TUBE (KP-46C65/48S65/53S65/61S65)

● : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK
301	4-040-131-21	LENS (LINNIT POINT 6) (KP-61S65)	
	4-056-258-01	LENS (DELTA 78) (KP-46C46/48S65/53S65)	
302	4-052-894-01	SCREW (4X20), HEAD TAPPING	
303	4-048-142-01	SPRING, TENSION	
304	⚠ A-1501-310-A	COUPLER (R) ASSY, PICTURE TUBE (KP-53S65(US (N65A-B)))	
	⚠ 8-733-539-05	PICTURE TUBE 07MXC2 (R) (KP-46C65)	
	⚠ 8-733-553-05	PICTURE TUBE 07MXC3 (R) (KP-48S65/53S65 (US (N65A-A), CND))	
	⚠ 8-733-555-05	PICTURE TUBE 07MAC4 (R) (KP-61S65)	
305	⚠ A-1501-312-A	COUPLER (G) ASSY, PICTURE TUBE (KP-53S65(US (N65A-B)))	
	⚠ 8-733-537-05	PICTURE TUBE 07MXC2 (G) (KP-46C65/48S65/53S65 (US (N65A-A), CND)/61S65)	
306	⚠ A-1501-311-A	COUPLER (B) ASSY, PICTURE TUBE (KP-53S65(US (N65A-B)))	
	⚠ 8-733-519-05	PICTURE TUBE 07MAC2 (B) (GROUND SPRING) (KP-46C65)	
	⚠ 8-733-528-05	PICTURE TUBE 07MAC3 (B) (GROUND SPRING) (KP-48S65/53S65 (US (N65A-A), CND))	
	⚠ 8-733-529-05	PICTURE TUBE 07MAC4 (B) (GROUND SPRING) (KP-61S65)	
307	⚠ 1-451-455-31	DEFLECTION YOKE (R) (B)	
308	⚠ 1-452-790-21	NECK ASSY	
309	⚠ 1-451-454-11	DEFLECTION YOKE (G)	
310	* A-1390-843-A	Z BOARD, COMPLETE	
311	1-452-909-31	MAGNET ASSY, 4 POLE	
312	* A-1331-777-A	CR BOARD, COMPLETE	
313	* A-1331-778-A	CG BOARD, COMPLETE	
314	* A-1331-779-A	CB BOARD, COMPLETE	
315	* 4-057-596-01	BRACKET, HV	
316	⚠ 8-598-955-30	BROCK ASSY, HIGH-VOLTAGE	
317	4-373-137-01	CAP (Z), RUBBER	
318	4-057-613-01	BOARD (R), SIDE (KP-61S65)	
319	4-058-638-01	STAY, CHASSIS (KP-61S65)	
320	4-057-612-01	BOARD (L), SIDE (KP-61S65)	

PT

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- The components identified by ⋈ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

- CAPACITORS
  PF : μμ F
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION			REMARK
*	A-1190-265-A	PT BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C5001	1-104-664-11	ELECT	47μF	20%	25V
C5002	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5003	1-126-957-11	ELECT	0.22μF	20%	50V
C5004	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5005	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V
C5006	1-126-959-11	ELECT	0.47μF	20%	50V
C5007	1-126-961-11	ELECT	2.2μF	20%	50V
C5008	1-126-963-11	ELECT	4.7μF	20%	50V
C5009	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C5010	1-126-934-11	ELECT	220μF	20%	16V
C5011	1-126-960-11	ELECT	1μF	20%	50V
C5012	1-126-959-11	ELECT	0.47μF	20%	50V
C5013	1-164-232-11	CERAMIC CHIP	0.01μF	10%	50V
C5014	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5015	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C5016	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5017	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5018	1-126-934-11	ELECT	220μF	20%	16V
C5019	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5020	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5021	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5022	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5023	1-126-964-11	ELECT	10μF	20%	50V
C5024	1-126-933-11	ELECT	100μF	20%	16V
C5025	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5051	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5052	1-164-489-11	CERAMIC CHIP	0.22μF	10%	16V
C5053	1-104-664-11	ELECT	47μF	20%	25V
C5054	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C5055	1-164-346-11	CERAMIC CHIP	1μF		16V
C5057	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C5058	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5062	1-104-664-11	ELECT	47μF	20%	25V
C5063	1-104-664-11	ELECT	47μF	20%	25V
C5064	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C5065	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C5066	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5067	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5068	1-126-960-11	ELECT	1μF	20%	50V
C5069	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5070	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5071	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5072	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5073	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C5076	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5077	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5078	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5079	1-104-664-11	ELECT	47μF	20%	25V
C5080	1-126-960-11	ELECT	1μF	20%	50V
C5101	1-104-664-11	ELECT	47μF	20%	25V
C5102	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5103	1-164-232-11	CERAMIC CHIP	0.01μF	10%	50V
C5104	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5105	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C5106	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5107	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C5108	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5109	1-126-964-11	ELECT	10μF	20%	50V
C5110	1-126-964-11	ELECT	10μF	20%	50V
C5111	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C5112	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C5113	1-164-489-11	CERAMIC CHIP	0.22μF	10%	16V
C5114	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C5115	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C5116	1-164-096-11	CERAMIC	0.01μF		50V
C5117	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C5118	1-164-232-11	CERAMIC CHIP	0.01μF	10%	50V
C5119	1-164-096-11	CERAMIC	0.01μF		50V
C5120	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C5121	1-164-232-11	CERAMIC CHIP	0.01μF	10%	50V
C5122	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C5123	1-126-960-11	ELECT	1μF	20%	50V
C5124	1-164-232-11	CERAMIC CHIP	0.01μF	10%	50V
C5125	1-164-232-11	CERAMIC CHIP	0.01μF	10%	50V
C5126	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V
C5127	1-104-664-11	ELECT	47μF	20%	25V
C5129	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5130	1-104-664-11	ELECT	47μF	20%	25V
C5131	1-164-232-11	CERAMIC CHIP	0.01μF	10%	50V
C5132	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C5133	1-163-038-11	CERAMIC CHIP	0.1μF		25V
C5134	1-163-038-11	CERAMIC CHIP	0.1μF		25V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C5135	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C5136	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C5137	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C5138	1-104-664-11	ELECT	47µF	20%	25V
C5139	1-126-964-11	ELECT	10µF	20%	50V
C5140	1-163-038-11	CERAMIC CHIP	0.1µF		25V
C5141	1-163-038-11	CERAMIC CHIP	0.1µF		25V
C5142	1-163-038-11	CERAMIC CHIP	0.1µF		25V
C5143	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C5144	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C5145	1-126-964-11	ELECT	10µF	20%	50V
C5146	1-164-232-11	CERAMIC CHIP	0.01µF	10%	50V
C5147	1-163-038-11	CERAMIC CHIP	0.1µF		25V
C5148	1-163-038-11	CERAMIC CHIP	0.1µF		25V
C5149	1-104-664-11	ELECT	47µF	20%	25V
C5150	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C5151	1-104-664-11	ELECT	47µF	20%	25V
C5152	1-163-031-11	CERAMIC CHIP	0.01µF	50V	
C5153	1-104-664-11	ELECT	47µF	20%	25V
C5154	1-104-664-11	ELECT	47µF	20%	25V
C5157	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V

<CONNECTOR>

CN5051	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P
CN5101	1-770-156-21	CONNECTOR, BOARD TO BOARD 8P

<DIODE>

D5053	8-719-404-49	DIODE MA111
D5101	8-719-158-15	DIODE RD5.6SB

<FERRITE BEAD>

FB5051	1-414-135-11	FERRITE	0µH
FB5052	1-414-135-11	FERRITE	0µH
FB5053	1-414-135-11	FERRITE	0µH
FB5101	1-216-295-91	CONDUCTOR, CHIP	
FB5102	1-216-295-91	CONDUCTOR, CHIP	
FB5103	1-216-295-91	CONDUCTOR, CHIP	
FB5104	1-414-135-11	FERRITE	0µH
FB5105	1-414-135-11	FERRITE	0µH
FB5106	1-414-135-11	FERRITE	0µH
FB5107	1-414-135-11	FERRITE	0µH
FB5108	1-410-396-41	FERRITE	0.45µH
FB5109	1-414-135-11	FERRITE	0µH
FB5110	1-414-135-11	FERRITE	0µH

<FILTER>

FL5101	1-239-847-11	FILTER, LOW PASS
FL5102	1-239-847-11	FILTER, LOW PASS
FL5103	1-239-847-11	FILTER, LOW PASS

<IC>

IC5001	8-752-078-83	IC CXA2019Q
IC5052	8-759-487-47	IC SDA9288X-B121
IC5101	8-752-375-30	IC CXD2043Q
IC5102	8-752-062-80	IC CXA1686M
IC5103	8-759-701-56	IC NJM78M05FA

<COIL>

L5001	1-410-478-11	INDUCTOR	47µH
L5002	1-410-478-11	INDUCTOR	47µH
L5003	1-410-478-11	INDUCTOR	47µH
L5004	1-410-478-11	INDUCTOR	47µH
L5052	1-408-607-31	INDUCTOR	22µH
L5101	1-410-470-11	INDUCTOR	10µH
L5102	1-410-476-11	INDUCTOR	33µH
L5103	1-410-470-11	INDUCTOR	10µH
L5105	1-410-470-11	INDUCTOR	10µH

<TRANSISTOR>

Q5001	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5002	8-729-216-22	TRANSISTOR 2SA1162-G
Q5003	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5004	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5005	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5051	8-729-216-22	TRANSISTOR 2SA1162-G
Q5052	8-729-216-22	TRANSISTOR 2SA1162-G
Q5053	8-729-216-22	TRANSISTOR 2SA1162-G
Q5054	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5055	8-729-216-22	TRANSISTOR 2SA1162-G
Q5056	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5057	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5101	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5102	8-729-216-22	TRANSISTOR 2SA1162-G
Q5103	8-729-216-22	TRANSISTOR 2SA1162-G
Q5104	8-729-216-22	TRANSISTOR 2SA1162-G
Q5105	8-729-216-22	TRANSISTOR 2SA1162-G
Q5106	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5107	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5108	8-729-422-27	TRANSISTOR 2SD601A-Q
Q5109	8-729-216-22	TRANSISTOR 2SA1162-G
Q5110	8-729-216-22	TRANSISTOR 2SA1162-G
Q5111	8-729-216-22	TRANSISTOR 2SA1162-G
Q5112	8-729-422-27	TRANSISTOR 2SD601A-Q

<RESISTOR>

R5001	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5002	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R5003	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5004	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5005	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5006	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5007	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5008	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R5009	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5010	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R5011	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R5012	1-216-073-00	METAL GLAZE	10K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R5013	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R5014	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5015	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5016	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5017	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5018	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5019	1-216-037-00	METAL GLAZE	330	5%	1/10W
R5021	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5022	1-216-047-91	METAL GLAZE	820	5%	1/10W
R5023	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5024	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5025	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R5026	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R5027	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5033	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5051	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R5052	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5053	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R5054	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R5055	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5056	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R5057	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5058	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5059	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5060	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5061	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R5062	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5063	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5072	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R5073	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5074	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5075	1-216-043-91	METAL GLAZE	560	5%	1/10W
R5076	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R5077	1-216-045-00	METAL GLAZE	680	5%	1/10W
R5078	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5079	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5080	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5081	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5082	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5084	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5085	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5089	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5090	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5091	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5092	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5102	1-216-295-91	CONDUCTOR, CHIP			
R5103	1-216-047-91	METAL GLAZE	820	5%	1/10W
R5104	1-216-295-91	CONDUCTOR, CHIP			
R5106	1-216-035-00	METAL GLAZE	270	5%	1/10W
R5107	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R5108	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R5109	1-208-776-11	METAL CHIP	560	0.50%	1/10W
R5110	1-208-774-11	METAL CHIP	470	0.50%	1/10W
R5112	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5113	1-216-043-91	METAL GLAZE	560	5%	1/10W
R5114	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R5115	1-216-049-91	METAL GLAZE	1K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R5116	1-216-043-91	METAL GLAZE	560	5%	1/10W
R5117	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5118	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R5120	1-208-766-11	METAL CHIP	220	0.50%	1/10W
R5121	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5122	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5124	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5127	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R5128	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R5129	1-216-043-91	METAL GLAZE	560	5%	1/10W
R5130	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R5132	1-216-043-91	METAL GLAZE	560	5%	1/10W
R5133	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R5134	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R5135	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R5136	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R5137	1-208-766-11	METAL CHIP	220	0.50%	1/10W
R5138	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R5139	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R5140	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5141	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5142	1-216-041-00	METAL GLAZE	470	5%	1/10W
R5143	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5144	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5145	1-216-035-00	METAL GLAZE	270	5%	1/10W
R5146	1-216-035-00	METAL GLAZE	270	5%	1/10W
R5147	1-208-788-11	METAL CHIP	1.8K	0.50%	1/10W
R5148	1-208-788-11	METAL CHIP	1.8K	0.50%	1/10W
R5149	1-216-043-91	METAL GLAZE	560	5%	1/10W
R5150	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R5151	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R5152	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5156	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5157	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5158	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5159	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5160	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5161	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5163	1-216-025-91	METAL GLAZE	100	5%	1/10W

<CRYSTAL>

X5001	1-577-611-11	OSCILALTOR, CERAMIC
X5002	1-567-505-11	OSCILLATOR, CRYSTAL
X5051	1-760-095-21	VIBRATOR, CRYSTAL
X5101	1-567-878-11	VIBRATOR, CRYSTAL
X5102	1-577-611-11	OSCILALTOR, CERAMIC

****

*	A-1298-448-A	A BOARD, COMPLETE
		**********

*	4-051-927-01	CASE, SHIELD
	4-382-854-11	SCREW (M3X10), P, SW (+)

<CAPACITOR>

REF. NO.	PART NO.	DESCRIPTION			REMARK
C001	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C004	1-126-933-11	ELECT	100µF	20%	16V
C005	1-126-964-11	ELECT	10µF	20%	50V
C006	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C017	1-163-809-11	CERAMIC CHIP	0.047µF	10%	25V
C018	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C019	1-126-960-11	ELECT	1µF	20%	50V
C021	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C024	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C025	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C026	1-107-714-11	ELECT	10µF	20%	16V
C027	1-126-935-11	ELECT	470µF	20%	16V
C028	1-107-714-11	ELECT	10µF	20%	16V
C032	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C033	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C034	1-163-809-11	CERAMIC CHIP	0.047µF	10%	25V
C035	1-104-664-11	ELECT	47µF	20%	25V
C036	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C037	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C038	1-126-960-11	ELECT	1µF	20%	50V
C045	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C046	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C047	1-163-010-11	CERAMIC CHIP	0.0012µF	10%	50V
C048	1-164-005-11	CERAMIC CHIP	0.47µF		25V
C054	1-163-033-91	CERAMIC CHIP	0.022µF	50V	
C057	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C092	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C107	1-163-031-11	CERAMIC CHIP	0.01µF	50V	
C108	1-104-664-11	ELECT	47µF	20%	25V
C109	1-126-916-11	ELECT	1000µF	20%	6.3V
C110	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C111	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C119	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C120	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C121	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C124	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C201	1-126-960-11	ELECT	1µF	20%	50V
C203	1-126-935-11	ELECT	470µF	20%	16V
C204	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C206	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C207	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C208	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C209	1-126-964-11	ELECT	10µF	20%	50V
C210	1-126-964-11	ELECT	10µF	20%	50V
C211	1-126-964-11	ELECT	10µF	20%	50V
C212	1-126-964-11	ELECT	10µF	20%	50V
C213	1-126-964-11	ELECT	10µF	20%	50V
C216	1-126-964-11	ELECT	10µF	20%	50V
C218	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C219	1-126-964-11	ELECT	10µF	20%	50V
C220	1-126-964-11	ELECT	10µF	20%	50V
C221	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C224	1-104-664-11	ELECT	47µF	20%	25V
C226	1-126-964-11	ELECT	10µF	20%	50V
C227	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C229	1-126-964-11	ELECT	10µF	20%	50V
C230	1-126-964-11	ELECT	10µF	20%	50V
C231	1-126-933-11	ELECT	100µF	20%	16V
C232	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C302	1-126-959-11	ELECT	0.47µF	20%	50V
C303	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C304	1-126-964-11	ELECT	10µF	20%	50V
C305	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C308	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C309	1-126-933-11	ELECT	100µF	20%	16V
C310	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C311	1-115-419-11	CERAMIC CHIP	3300PF	5%	25V
C312	1-126-959-11	ELECT	0.47µF	20%	50V
C313	1-130-495-00	FILM	0.1µF	5%	50V
C314	1-130-495-00	FILM	0.1µF	5%	50V
C315	1-130-495-00	FILM	0.1µF	5%	50V
C316	1-164-232-11	CERAMIC CHIP	0.01µF	10%	50V
C317	1-164-232-11	CERAMIC CHIP	0.01µF	10%	50V
C318	1-164-232-11	CERAMIC CHIP	0.01µF	10%	50V
C319	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C320	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C321	1-126-963-11	ELECT	4.7µF	20%	50V
C322	1-130-495-00	MYLAR	0.1µF	5%	50V
C323	1-137-581-11	FILM	0.1µF	5%	100V
C324	1-164-182-11	CERAMIC CHIP	0.0033µF	10%	50V
C325	1-126-959-11	ELECT	0.47µF	20%	50V
C326	1-126-964-11	ELECT	10µF	20%	50V
C329	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
C330	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C331	1-126-959-11	ELECT	0.47µF	20%	50V
C332	1-164-232-11	CERAMIC CHIP	0.01µF	10%	50V
C333	1-164-232-11	CERAMIC CHIP	0.01µF	10%	50V
C334	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C335	1-126-935-11	ELECT	470µF	20%	16V
C337	1-126-960-11	ELECT	1µF	20%	50V
C338	1-126-961-11	ELECT	2.2µF	20%	50V
C339	1-126-959-11	ELECT	0.47µF	20%	50V
C342	1-130-495-00	FILM	0.1µF	5%	50V
C344	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C345	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C349	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C351	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C401	1-126-964-11	ELECT	10µF	20%	50V
C402	1-126-964-11	ELECT	10µF	20%	50V
C403	1-137-367-11	FILM	0.0033µF	5%	50V
C404	1-137-367-11	FILM	0.0033µF	5%	50V
C405	1-137-372-11	FILM	0.022µF	5%	50V
C406	1-130-495-00	FILM	0.1µF	5%	50V
C407	1-126-960-11	ELECT	1µF	20%	50V
C408	1-137-367-11	FILM	0.0033µF	5%	50V
C409	1-137-367-11	FILM	0.0033µF	5%	50V
C410	1-137-372-11	FILM	0.022µF	5%	50V
C411	1-130-495-00	FILM	0.1µF	5%	50V
C412	1-126-933-11	ELECT	100µF	20%	16V
C413	1-128-551-11	ELECT	22µF	20%	25V
C414	1-163-038-11	CERAMIC CHIP	0.1µF		25V
C415	1-126-964-11	ELECT	10µF	20%	50V

A

REF. NO.	PART NO.	DESCRIPTION			REMARK
C416	1-126-964-11	ELECT	10µF	20%	50V
C417	1-126-964-11	ELECT	10µF	20%	50V
C418	1-104-664-11	ELECT	47µF	20%	25V
C419	1-128-551-11	ELECT	22µF	20%	25V
C422	1-104-664-11	ELECT	47µF	20%	25V
C424	1-126-961-11	ELECT	2.2µF	20%	50V
C425	1-126-935-11	ELECT	470µF	20%	16V
C426	1-126-964-11	ELECT	10µF	20%	50V
C427	1-126-933-11	ELECT	100µF	20%	16V
C428	1-126-969-11	ELECT	220µF	20%	50V
C429	1-126-967-11	ELECT	47µF	20%	50V
C430	1-126-964-11	ELECT	10µF	20%	50V
C431	1-126-969-11	ELECT	220µF	20%	50V
C432	1-136-173-00	FILM	0.47µF	5%	50V
C433	1-130-495-00	FILM	0.1µF	5%	50V
C434	1-128-550-11	ELECT	2200µF	20%	50V
C435	1-130-495-00	FILM	0.1µF	5%	50V
C436	1-128-548-11	ELECT	4700µF	20%	25V
C437	1-128-548-11	ELECT	4700µF	20%	25V
C440	1-126-964-11	ELECT	10µF	20%	50V
C441	1-126-964-11	ELECT	10µF	20%	50V
C1101	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1102	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1103	1-126-933-11	ELECT	100µF	20%	16V
C1104	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C1105	1-126-960-11	ELECT	1µF	20%	50V
C1106	1-126-933-11	ELECT	100µF	20%	16V
C1107	1-104-664-11	ELECT	47µF	20%	25V
C1108	1-126-964-11	ELECT	10µF	20%	50V
C1109	1-126-933-11	ELECT	100µF	20%	16V
C1110	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C1111	1-126-960-11	ELECT	1µF	20%	50V
C1112	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1113	1-126-964-11	ELECT	10µF	20%	50V
C1114	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1115	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1116	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1117	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1118	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1119	1-126-968-11	ELECT	100µF	20%	50V
C1120	1-126-933-11	ELECT	100µF	20%	16V
C1122	1-104-664-11	ELECT	47µF	20%	25V
C1501	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C1502	1-107-504-11	CERAMIC	10PF	0.5PF	500V
C1503	1-136-177-00	FILM	1µF	5%	50V
C1506	1-126-969-11	ELECT	220µF	20%	50V
C1507	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C1508	1-137-401-11	FILM	0.22µF	10%	100V
C1509	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1510	1-126-942-61	ELECT	1000µF	20%	25V
C1511	1-126-942-61	ELECT	1000µF	20%	25V
C1513	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1514	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1517	1-126-964-11	ELECT	10µF	20%	50V
C1518	1-126-933-11	ELECT	100µF	20%	16V
C1519	1-126-933-11	ELECT	100µF	20%	16V
C1520	1-126-964-11	ELECT	10µF	20%	50V
C1521	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C1522	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C1523	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C1524	1-137-150-11	MYLAR	0.01µF	10%	100V
C1525	1-106-220-00	MYLAR	0.1µF	10%	100V
C1601	1-126-935-11	ELECT	470µF	20%	16V
C1602	1-126-767-11	ELECT	1000µF	20%	16V
C1603	1-126-916-11	ELECT	1000µF	20%	6.3V
C1604	1-126-934-11	ELECT	220µF	20%	16V
C1605	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1606	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1607	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1608	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1609	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C1610	1-126-933-11	ELECT	100µF	20%	16V
C1611	1-163-031-11	CERAMIC CHIP	0.01µF		50V

<CONNECTOR>

CN001	*	1-564-507-11	PLUG, CONNECTOR 4P
CN002	*	1-564-511-11	PLUG, CONNECTOR 8P
CN003	*	1-774-183-11	CONNECTOR, BOARD TOBOARD10P
CN004		1-573-979-21	CONNECTOR, BOARD TO BOARD 11P
CN301	*	1-774-183-11	CONNECTOR, BOARD TOBOARD10P
CN302	*	1-564-508-11	PLUG, CONNECTOR 5P
CN303	*	1-564-512-11	PLUG, CONNECTOR 9P
CN304		1-770-155-21	CONNECTOR, BOARD TO BOARD 8P
CN305		1-573-298-21	CONNECTOR, BOARD TO BOARD 20P
CN401	*	1-564-507-11	PLUG, CONNECTOR 4P
CN402	*	1-564-506-11	PLUG, CONNECTOR 3P
CN403		1-695-915-11	TAB (CONTACT)
CN1101	*	1-564-514-11	PLUG, CONNECTOR 11P
CN1501	*	1-564-506-11	PLUG, CONNECTOR 3P
CN1601	*	1-774-183-11	CONNECTOR, BOARD TOBOARD10P
CN1602	*	1-774-183-11	CONNECTOR, BOARD TOBOARD10P

<DIODE>

D001	8-719-991-33	DIODE 1SS133T-77
D002	8-719-991-33	DIODE 1SS133T-77
D003	8-719-991-33	DIODE 1SS133T-77
D004	8-719-991-33	DIODE 1SS133T-77
D007	8-719-109-89	DIODE RD5.6ESB2
D010	8-719-109-89	DIODE RD5.6ESB2
D011	8-719-109-89	DIODE RD5.6ESB2
D202	8-719-110-17	DIODE RD10ESB2
D203	8-719-109-89	DIODE RD5.6ESB2
D206	8-719-977-28	DIODE DTZ10B
D207	8-719-977-28	DIODE DTZ10B
D208	8-719-977-28	DIODE DTZ10B
D209	8-719-977-28	DIODE DTZ10B
D210	8-719-977-28	DIODE DTZ10B
D211	8-719-977-28	DIODE DTZ10B
D212	8-719-977-28	DIODE DTZ10B
D213	8-719-977-28	DIODE DTZ10B
D214	8-719-110-17	DIODE RD10ESB2
D215	8-719-110-17	DIODE RD10ESB2
D216	8-719-110-17	DIODE RD10ESB2

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
D217	8-719-110-17	DIODE RD10ESB2	
D218	8-719-110-17	DIODE RD10ESB2	
D219	8-719-110-17	DIODE RD10ESB2	
D220	8-719-110-17	DIODE RD10ESB2	
D221	8-719-110-17	DIODE RD10ESB2	
D222	8-719-110-17	DIODE RD10ESB2	
D225	8-719-110-17	DIODE RD10ESB2	
D226	8-719-110-17	DIODE RD10ESB2	
D232	8-719-983-38	DIODE MTZJ-T-77-36B	
D236	8-719-110-17	DIODE RD10ESB2	
D237	8-719-110-17	DIODE RD10ESB2	
D238	8-719-110-17	DIODE RD10ESB2	
D239	8-719-991-33	DIODE 1SS133T-77	
D240	8-719-991-33	DIODE 1SS133T-77	
D241	8-719-991-33	DIODE 1SS133T-77	
D305	8-719-110-17	DIODE RD10ESB2	
D401	8-719-991-33	DIODE 1SS133T-77	
D403	8-719-983-38	DIODE MTZJ-T-77-36B	
D405	8-719-991-33	DIODE 1SS133T-77	
D406	8-719-991-33	DIODE 1SS133T-77	
D408	8-719-991-33	DIODE 1SS133T-77	
D410	8-719-983-38	DIODE MTZJ-T-77-36B	
D411	8-719-929-15	DIODE HZS9.1NB2	
D1101	8-719-982-26	DIODE MTZJ-33B	
D1102	8-719-977-28	DIODE DTZ10B	
D1103	8-719-977-28	DIODE DTZ10B	
D1104	8-719-977-28	DIODE DTZ10B	
D1105	8-719-977-28	DIODE DTZ10B	
D1106	8-719-977-28	DIODE DTZ10B	
D1107	8-719-977-28	DIODE DTZ10B	
D1501	8-719-109-89	DIODE RD5.6ESB2	
D1502	8-719-908-03	DIODE GP08D	
		<FERRITE BEAD>	
FB1102	1-414-135-11	FERRITE 0µH	
		<IC>	
IC001	8-752-894-96	IC CXP85856A-009S	
IC002	8-752-861-57	IC CXP85112B-613S	
IC003	8-759-352-91	IC PST9143NL	
IC004	8-759-352-91	IC PST9143NL	
IC007	8-759-518-23	IC X24C04S8	
IC201	8-759-534-81	IC MM1313AD/	
IC301 ⚠	8-752-076-76	IC CXA2025AS	
IC401	8-759-369-39	IC BH3856FS-E2	
IC402	8-759-100-96	IC UPC4558G2	
IC403	8-759-089-13	IC TDA7262	
IC1101	8-759-231-53	IC TA7805S	
IC1501	8-759-192-71	IC STV9379	
IC1502	8-759-251-31	IC CA0007AM	
IC1601	8-759-198-03	IC PQ09RF21	
IC1602	8-759-231-53	IC TA7805S	
		<JACK>	
J203	1-507-667-00	JACK, MIC	
J205	1-774-750-11	JACK BLOCK, PIN	
J206	1-774-749-11	JACK BLOCK, PIN	
J208	1-774-749-11	JACK BLOCK, PIN	
J209	1-774-751-11	TERMINAL BLOCK, S	
		<CHIP CONDUCTOR>	
JR003	1-216-295-91	CONDUCTOR, CHIP	
JR201	1-216-295-91	CONDUCTOR, CHIP	
JR202	1-216-295-91	CONDUCTOR, CHIP	
JR1501	1-216-295-91	CONDUCTOR, CHIP	
JR1502	1-216-295-91	CONDUCTOR, CHIP	
JR1601	1-216-295-91	CONDUCTOR, CHIP	
JR1602	1-216-295-91	CONDUCTOR, CHIP	
JR1603	1-216-295-91	CONDUCTOR, CHIP	
JR1604	1-216-295-91	CONDUCTOR, CHIP	
JR1605	1-216-295-91	CONDUCTOR, CHIP	
JR1607	1-216-295-91	CONDUCTOR, CHIP	
JR1609	1-216-295-91	CONDUCTOR, CHIP	
JR1610	1-216-295-91	CONDUCTOR, CHIP	
JR1611	1-216-295-91	CONDUCTOR, CHIP	
JR1612	1-216-295-91	CONDUCTOR, CHIP	
JR1613	1-216-295-91	CONDUCTOR, CHIP	
JR1614	1-216-295-91	CONDUCTOR, CHIP	
JR1615	1-216-295-91	CONDUCTOR, CHIP	
JR1617	1-216-295-91	CONDUCTOR, CHIP	
JR1619	1-216-295-91	CONDUCTOR, CHIP	
JR1620	1-216-295-91	CONDUCTOR, CHIP	
JR1621	1-216-295-91	CONDUCTOR, CHIP	
JR1622	1-216-295-91	CONDUCTOR, CHIP	
JR1623	1-216-295-91	CONDUCTOR, CHIP	
JR1624	1-216-295-91	CONDUCTOR, CHIP	
JR1625	1-216-295-91	CONDUCTOR, CHIP	
JR1627	1-216-295-91	CONDUCTOR, CHIP	
JR1629	1-216-295-91	CONDUCTOR, CHIP	
		<COIL>	
L002	1-410-482-31	INDUCTOR 100µH	
L003	1-410-482-31	INDUCTOR 100µH	
L004	1-216-295-91	CONDUCTOR, CHIP	
L005	1-216-295-91	CONDUCTOR, CHIP	
L006	1-410-470-11	INDUCTOR 10µH	
L007	1-410-482-31	INDUCTOR 100µH	
L201	1-410-478-11	INDUCTOR 47µH	
L302	1-410-482-31	INDUCTOR 100µH	
L303	1-410-470-11	INDUCTOR 10µH	
L1101	1-410-478-11	INDUCTOR 47µH	
L1103	1-410-478-11	INDUCTOR 47µH	
L1104	1-410-478-11	INDUCTOR 47µH	
L1105	1-410-470-11	INDUCTOR 10µH	
L1106	1-410-478-11	INDUCTOR 47µH	
L1501	1-406-663-21	INDUCTOR 0µH	
L1502	1-412-533-21	INDUCTOR 47µH	
L1503	1-412-533-21	INDUCTOR 47µH	
L1601	1-406-975-21	INDUCTOR 0µH	

A

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<IC LINK>	
PS401	1-532-984-11	LINK, IC 2A/90V	
		<TRANSISTOR>	
Q001	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q002	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q003	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q004	8-729-216-22	TRANSISTOR 2SA1162-G	
Q005	8-729-216-22	TRANSISTOR 2SA1162-G	
Q006	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q007	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q008	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q009	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q013	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q015	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q016	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q017	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q201	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q206	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q207	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q209	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q213	8-729-216-22	TRANSISTOR 2SA1162-G	
Q214	8-729-216-22	TRANSISTOR 2SA1162-G	
Q216	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q217	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q218	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q219	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q220	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q226	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q303	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q304	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q305	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q307	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q311	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q312	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q313	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q314	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q402	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q403	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q405	8-729-216-22	TRANSISTOR 2SA1162-G	
Q406	8-729-216-22	TRANSISTOR 2SA1162-G	
Q408	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q409	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q410	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q411	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q1101	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q1501	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2105	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2106	8-729-422-27	TRANSISTOR 2SD601A-Q	

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R003	1-216-295-91	CONDUCTOR, CHIP			
R004	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R005	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R006	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R007	1-216-081-00	METAL GLAZE	22K	5% 1/10W	
R008	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R009	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R010	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R011	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R012	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R013	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R014	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R015	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R016	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R017	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R018	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R019	1-216-097-91	METAL GLAZE	100K	5% 1/10W	
R020	1-216-057-00	METAL GLAZE	2.2K	5% 1/10W	
R021	1-216-089-91	METAL GLAZE	47K	5% 1/10W	
R023	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R024	1-216-121-91	METAL GLAZE	1M	5% 1/10W	
R025	1-216-097-91	METAL GLAZE	100K	5% 1/10W	
R026	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R027	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R030	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R033	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R034	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R035	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R036	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R037	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R038	1-216-089-91	METAL GLAZE	47K	5% 1/10W	
R039	1-216-089-91	METAL GLAZE	47K	5% 1/10W	
R040	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R041	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R042	1-216-089-91	METAL GLAZE	47K	5% 1/10W	
R043	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R045	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R046	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R047	1-216-057-00	METAL GLAZE	2.2K	5% 1/10W	
R048	1-216-065-91	METAL GLAZE	4.7K	5% 1/10W	
R050	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R053	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R054	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R056	1-216-121-91	METAL GLAZE	1M	5% 1/10W	
R057	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R058	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R059	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R060	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R061	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R063	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R064	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R065	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R066	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R067	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R068	1-216-033-00	METAL GLAZE	220	5% 1/10W	

REF. NO.	PART NO.	DESCRIPTION			REMARK
R070	1-216-033-00	METAL GLAZE	220	5%	1/10W
R071	1-216-033-00	METAL GLAZE	220	5%	1/10W
R072	1-216-033-00	METAL GLAZE	220	5%	1/10W
R073	1-216-033-00	METAL GLAZE	220	5%	1/10W
R074	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R075	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R076	1-216-033-00	METAL GLAZE	220	5%	1/10W
R077	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R078	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R080	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R081	1-216-033-00	METAL GLAZE	220	5%	1/10W
R084	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R085	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R086	1-216-033-00	METAL GLAZE	220	5%	1/10W
R087	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R088	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R090	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R091	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R092	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R099	1-216-037-00	METAL GLAZE	330	5%	1/10W
R111	1-216-033-00	METAL GLAZE	220	5%	1/10W
R112	1-216-033-00	METAL GLAZE	220	5%	1/10W
R113	1-216-033-00	METAL GLAZE	220	5%	1/10W
R115	1-216-033-00	METAL GLAZE	220	5%	1/10W
R117	1-216-033-00	METAL GLAZE	220	5%	1/10W
R118	1-216-033-00	METAL GLAZE	220	5%	1/10W
R119	1-216-033-00	METAL GLAZE	220	5%	1/10W
R120	1-216-033-00	METAL GLAZE	220	5%	1/10W
R121	1-216-033-00	METAL GLAZE	220	5%	1/10W
R122	1-216-033-00	METAL GLAZE	220	5%	1/10W
R123	1-216-033-00	METAL GLAZE	220	5%	1/10W
R124	1-216-033-00	METAL GLAZE	220	5%	1/10W
R125	1-216-033-00	METAL GLAZE	220	5%	1/10W
R127	1-216-033-00	METAL GLAZE	220	5%	1/10W
R128	1-216-033-00	METAL GLAZE	220	5%	1/10W
R131	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R132	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R133	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R147	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R148	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R149	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R154	1-216-025-91	METAL GLAZE	100	5%	1/10W
R155	1-216-025-91	METAL GLAZE	100	5%	1/10W
R156	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R157	1-216-017-91	METAL GLAZE	47	5%	1/10W
R158	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R159	1-216-017-91	METAL GLAZE	47	5%	1/10W
R160	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R161	1-216-017-91	METAL GLAZE	47	5%	1/10W
R163	1-216-033-00	METAL GLAZE	220	5%	1/10W
R164	1-216-033-00	METAL GLAZE	220	5%	1/10W
R165	1-216-033-00	METAL GLAZE	220	5%	1/10W
R171	1-216-035-00	METAL GLAZE	270	5%	1/10W
R172	1-216-035-00	METAL GLAZE	270	5%	1/10W
R173	1-216-035-00	METAL GLAZE	270	5%	1/10W
R204	1-249-377-11	CARBON	0.47	5%	1/4W F
R206	1-216-022-00	METAL GLAZE	75	5%	1/10W
R213	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R214	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R215	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R216	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R217	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R218	1-216-022-00	METAL GLAZE	75	5%	1/10W
R219	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R220	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R221	1-216-022-00	METAL GLAZE	75	5%	1/10W
R222	1-216-022-00	METAL GLAZE	75	5%	1/10W
R223	1-216-022-00	METAL GLAZE	75	5%	1/10W
R224	1-216-017-91	METAL GLAZE	47	5%	1/10W
R225	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R227	1-216-019-00	METAL GLAZE	56	5%	1/10W
R229	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R230	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R231	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R235	1-216-041-00	METAL GLAZE	470	5%	1/10W
R236	1-216-041-00	METAL GLAZE	470	5%	1/10W
R241	1-216-041-00	METAL GLAZE	470	5%	1/10W
R245	1-216-041-00	METAL GLAZE	470	5%	1/10W
R255	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R258	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R260	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R261	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R262	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R263	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R264	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R265	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R266	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R268	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R275	1-216-033-00	METAL GLAZE	220	5%	1/10W
R276	1-216-033-00	METAL GLAZE	220	5%	1/10W
R277	1-216-025-91	METAL GLAZE	100	5%	1/10W
R278	1-216-025-91	METAL GLAZE	100	5%	1/10W
R279	1-216-025-91	METAL GLAZE	100	5%	1/10W
R280	1-216-041-00	METAL GLAZE	470	5%	1/10W
R281	1-216-041-00	METAL GLAZE	470	5%	1/10W
R282	1-216-041-00	METAL GLAZE	470	5%	1/10W
R283	1-216-041-00	METAL GLAZE	470	5%	1/10W
R284	1-216-041-00	METAL GLAZE	470	5%	1/10W
R285	1-216-041-00	METAL GLAZE	470	5%	1/10W
R286	1-216-025-91	METAL GLAZE	100	5%	1/10W
R287	1-216-025-91	METAL GLAZE	100	5%	1/10W
R288	1-216-025-91	METAL GLAZE	100	5%	1/10W
R289	1-216-025-91	METAL GLAZE	100	5%	1/10W
R290	1-216-025-91	METAL GLAZE	100	5%	1/10W
R291	1-216-025-91	METAL GLAZE	100	5%	1/10W
R294	1-216-043-91	METAL GLAZE	560	5%	1/10W
R295	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R296	1-216-025-91	METAL GLAZE	100	5%	1/10W
R297	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R299	1-216-041-00	METAL GLAZE	470	5%	1/10W
R301	1-216-041-00	METAL GLAZE	470	5%	1/10W
R302	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R303	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R304	1-216-049-91	METAL GLAZE	1K	5%	1/10W

A

REF. NO.	PART NO.	DESCRIPTION			REMARK
R305	1-216-033-00	METAL GLAZE	220	5%	1/10W
R306	1-216-025-91	METAL GLAZE	100	5%	1/10W
R307	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R308	1-216-017-91	METAL GLAZE	47	5%	1/10W
R309	1-216-017-91	METAL GLAZE	47	5%	1/10W
R310	1-216-017-91	METAL GLAZE	47	5%	1/10W
R314	1-216-033-00	METAL GLAZE	220	5%	1/10W
R315	1-216-033-00	METAL GLAZE	220	5%	1/10W
R319	1-216-033-00	METAL GLAZE	220	5%	1/10W
R320	1-216-033-00	METAL GLAZE	220	5%	1/10W
R322	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R323	1-216-025-91	METAL GLAZE	100	5%	1/10W
R324	1-216-025-91	METAL GLAZE	100	5%	1/10W
R325	1-216-025-91	METAL GLAZE	100	5%	1/10W
R326	1-208-786-11	METAL GLAZE	1.5K	0.50%	1/10W
R327	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R328	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R330	1-216-025-91	METAL GLAZE	100	5%	1/10W
R331	1-216-025-91	METAL GLAZE	100	5%	1/10W
R332	1-216-035-00	METAL GLAZE	270	5%	1/10W
R333	1-208-810-11	METAL GLAZE	15K	0.50%	1/10W
R334	1-216-043-91	METAL GLAZE	560	5%	1/10W
R335	1-216-033-00	METAL GLAZE	220	5%	1/10W
R337	1-216-033-00	METAL GLAZE	220	5%	1/10W
R338	1-216-033-00	METAL GLAZE	220	5%	1/10W
R339	1-216-033-00	METAL GLAZE	220	5%	1/10W
R340	1-216-025-91	METAL GLAZE	100	5%	1/10W
R342	1-216-025-91	METAL GLAZE	100	5%	1/10W
R343	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R344	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R345	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R346	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R347	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R348	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W
R349	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R350	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R351	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R352	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R353	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R354	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R355	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R356	1-216-025-91	METAL GLAZE	100	5%	1/10W
R357	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R361	1-216-041-00	METAL GLAZE	470	5%	1/10W
R362	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R363	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R364	1-208-783-11	METAL GLAZE	1.1K	0.50%	1/10W
R365	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R366	1-216-017-91	METAL GLAZE	47	5%	1/10W
R367	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R368	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R369	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R370	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R371	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R372	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R373	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R374	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R375	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R376	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R377	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R378	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R379	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R380	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R381	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R384	1-249-377-11	CARBON	0.47	5%	1/4W F
R401	1-249-377-11	CARBON	0.47	5%	1/4W F
R402	1-249-377-11	CARBON	0.47	5%	1/4W F
R403	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R404	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R406	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R407	1-216-025-91	METAL GLAZE	100	5%	1/10W
R408	1-216-025-91	METAL GLAZE	100	5%	1/10W
R412	1-216-025-91	METAL GLAZE	100	5%	1/10W
R413	1-216-025-91	METAL GLAZE	100	5%	1/10W
R414	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R415	1-216-041-00	METAL GLAZE	470	5%	1/10W
R416	1-216-041-00	METAL GLAZE	470	5%	1/10W
R418	1-216-025-91	METAL GLAZE	100	5%	1/10W
R422	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R423	1-216-025-91	METAL GLAZE	100	5%	1/10W
R424	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R425	1-216-041-00	METAL GLAZE	470	5%	1/10W
R427	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R428	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R429	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R430	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R432	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R433	1-216-011-00	METAL GLAZE	27	5%	1/10W
R434	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R435	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R436	1-216-011-00	METAL GLAZE	27	5%	1/10W
R437	1-249-418-11	CARBON	1.2K	5%	1/4W F
R438	1-249-418-11	CARBON	1.2K	5%	1/4W F
R439	1-249-389-11	CARBON	4.7	5%	1/4W F
R440	1-249-389-11	CARBON	4.7	5%	1/4W F
R441	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R442	1-216-025-91	METAL GLAZE	100	5%	1/10W
R443	1-216-295-91	CONDUCTOR, CHIP			
R444	1-216-295-91	CONDUCTOR, CHIP			
R1101	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R1102	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1103	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R1104	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1105	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R1106	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R1107	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R1108	1-215-900-11	METAL OXIDE	22K	5%	2W F
R1501	1-216-351-00	METAL OXIDE	1.5	5%	1W F
R1502	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R1504	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R1505	1-215-857-11	METAL OXIDE	10	5%	1W F
R1506	1-215-888-00	METAL OXIDE	220	5%	2W F
R1507	1-216-081-00	METAL GLAZE	22K	5%	1/10W

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

• The components identified by ⋈ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

A G

REF. NO.	PART NO.	DESCRIPTION			REMARK
R1508	1-249-383-11	CARBON	1.5	5%	1/4W F
R1509	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R1510	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R1511	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1520	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1522	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1523	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1524	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1525	1-216-686-11	METAL CHIP	30K	0.50%	1/10W
R1526	1-216-686-11	METAL CHIP	30K	0.50%	1/10W
R1527	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1528	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1529	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2106	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2109	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2110	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2111	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2112	1-216-065-91	METAL GLAZE	4.7K	5%	1/10W
R2201	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2202	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2203	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2204	1-216-045-00	METAL GLAZE	680	5%	1/10W
R2205	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2208	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2209	1-216-041-00	METAL GLAZE	470	5%	1/10W
		<THERMISTOR>			
TH1501	1-800-193-00	THERMISTOR			
		<TUNER>			
TU1101	8-598-340-00	TUNER, FSS BTF-WA404			
TU1102	8-598-339-00	TUNER, FSS BTF-LA402			
		<CRYSTAL>			
X001	1-577-358-21	VIBRATOR, CERAMIC			
X002	1-578-774-11	VIBRATOR, CRYSTAL			
X301	1-567-505-11	OSCILLATOR, CRYSTAL			
X304	1-577-611-11	OSCILALTOR, CERAMIC			
**********					
*	A-1316-365-A	G BOARD, COMPLETE (KP-46C65/53S65 (CND))			
		**********			
*	A-1316-367-A	G BOARD, COMPLETE (KP-41T65/48S65/53S65 (US (N65A-A) /61S65)			
		**********			
*	A-1316-379-A	G BOARD, COMPLETE (KP-53S65 (US (N65A-B)))			
		**********			
*	4-057-835-01	PLATE, TRANSFORMER SHIELD			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	7-682-952-09	SCREW +PSW 3X16			

REF. NO.		PART NO.	DESCRIPTION			REMARK
			<CAPACITOR>			
C502		1-126-959-11	ELECT	0.47µF	20%	50V
C504		1-102-116-00	CERAMIC	680PF	10%	50V
C505		1-130-471-00	MYLAR	0.001µF	5%	50V
C506		1-126-933-11	ELECT	100µF	20%	16V
C507		1-126-965-11	ELECT	22µF	20%	50V
C508		1-102-212-00	CERAMIC	820PF	10%	500V
C509		1-106-383-00	MYLAR	0.047µF	10%	200V
C510		1-102-002-00	CERAMIC	680PF	10%	500V
C511		1-130-475-00	MYLAR	0.0022µF	5%	50V
C512		1-136-479-11	FILM	0.001µF	5%	50V
C513		1-126-965-11	ELECT	22µF	20%	50V
⋈ C514	⚠		CERAMIC			2KV
C515	⚠	1-125-831-91	FILM	0.033µF	3%	630V
C516	⚠	1-117-807-11	FILM	14500PF	3%	1.6KV
C518		1-130-495-00	MYLAR	0.1µF	5%	50V
C519		1-136-287-11	FILM	0.0047µF	5%	100V
C520		1-162-116-00	CERAMIC	680PF	10%	2KV
C521		1-162-116-00	CERAMIC	680PF	10%	2KV
C523		1-117-673-11	FILM	1.5µF	5%	200V
C524		1-136-287-11	FILM	0.0047µF	5%	100V
C526		1-102-228-00	CERAMIC	470PF	10%	500V
C527		1-104-664-11	ELECT	47µF	20%	25V
C528		1-107-649-11	ELECT	2.2µF	20%	250V
C529		1-109-961-11	FILM	0.75µF	5%	200V
C530		1-110-626-11	ELECT	330µF	20%	160V
C531		1-126-971-11	ELECT	470µF	20%	50V
C532		1-126-971-11	ELECT	470µF	20%	50V
C533		1-128-562-11	ELECT	47µF	20%	100V
C535		1-106-387-00	MYLAR	0.068µF	5%	200V
C536		1-130-489-00	MYLAR	0.033µF	5%	50V
			(KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND) /61S65)			
C536		1-137-374-11	FILM	0.0047µF	5%	50V
			(KP-53S65 (US (N65A-B)))			
C537		1-104-665-11	ELECT	100µF	20%	25V
C538		1-104-665-11	ELECT	100µF	20%	25V
C539		1-162-114-00	CERAMIC	0.0047µF	2KV	
C540		1-130-487-00	MYLAR	0.022µF	5%	50V
C541		1-130-489-00	MYLAR	0.033µF	5%	50V
C542		1-104-666-11	ELECT	220µF	20%	25V
C544		1-104-665-11	ELECT	100µF	20%	25V
C545		1-104-665-11	ELECT	100µF	20%	25V
C546		1-107-637-11	ELECT	22µF	20%	160V
C548		1-102-244-00	CERAMIC	220PF	10%	500V
C550		1-126-935-11	ELECT	470µF	20%	16V
C551		1-126-935-11	ELECT	470µF	20%	16V
C554		1-129-702-00	FILM	0.001µF	5%	630V
C555		1-126-960-11	ELECT	1µF	20%	50V
C556		1-130-495-00	MYLAR	0.1µF	5%	50V
C602	⚠	1-113-920-11	CERAMIC	0.0022µF	20%	250V
C603		1-102-228-00	CERAMIC	470PF	10%	500V
C604	⚠	1-136-311-11	FILM	0.47µF	20%	125V
C605	⚠	1-113-920-11	CERAMIC	0.0022µF	20%	250V
C606	⚠	1-136-311-11	FILM	0.47µF	20%	125V
C607		1-125-692-11	ELECT(BLOCK)	820µF	20%	200V
C608		1-125-692-11	ELECT(BLOCK)	820µF	20%	200V
C612		1-164-646-11	CERAMIC	2200PF	10%	500V

G

REF. NO.	PART NO.	DESCRIPTION			REMARK
C615	1-136-173-00	FILM	0.47µF	5%	50V
C616	1-136-173-00	FILM	0.47µF	5%	50V
C617	1-136-169-00	FILM	0.22µF	5%	50V
C618	1-136-169-00	FILM	0.22µF	5%	50V
C621	1-129-719-00	FILM	0.027µF	5%	630V
C651	1-107-910-11	ELECT	100µF	20%	35V
C652	1-123-024-21	ELECT	33µF		160V
C653	1-115-755-11	ELECT	180µF	20%	16V
C654	1-115-755-11	ELECT	180µF	20%	16V
C655	1-126-943-11	ELECT	2200µF	20%	25V
C656	1-126-943-11	ELECT	2200µF	20%	25V
C657	1-126-943-11	ELECT	2200µF	20%	25V
C658	1-128-550-11	ELECT	2200µF	20%	50V
C659	1-102-074-00	CERAMIC	0.001µF	10%	50V
C660	1-126-235-11	ELECT	100µF	20%	6.3V
C661	1-102-074-00	CERAMIC	0.001µF	10%	50V
C662	1-104-664-11	ELECT	47µF	20%	25V
C663	1-104-664-11	ELECT	47µF	20%	25V
C664	1-107-888-11	ELECT	47µF	20%	25V
C665	1-104-666-11	ELECT	220µF	20%	25V
C666	1-126-960-11	ELECT	1µF	20%	50V
C667	1-104-664-11	ELECT	47µF	20%	25V
C668	1-126-933-11	ELECT	100µF	20%	16V
C671	1-104-664-11	ELECT	47µF	20%	25V
C672	1-126-971-11	ELECT	470µF	20%	50V
C673	1-164-644-11	CERAMIC	330PF	10%	500V
C675	1-104-665-11	ELECT	100µF	20%	25V
C676	1-126-960-11	ELECT	1µF	20%	50V
C801	1-104-665-11	ELECT	100µF	20%	25V
C802	1-104-665-11	ELECT	100µF	20%	25V
C803	1-126-934-11	ELECT	220µF	20%	16V
C804	1-126-934-11	ELECT	220µF	20%	16V
C805	1-126-934-11	ELECT	220µF	20%	16V
C806	1-126-934-11	ELECT	220µF	20%	16V
C807	1-137-374-11	FILM	0.047µF	5%	50V
C808	1-137-374-11	FILM	0.047µF	5%	50V
C809	1-137-374-11	FILM	0.047µF	5%	50V
C810	1-137-374-11	FILM	0.047µF	5%	50V
C811	1-137-366-11	FILM	0.0022µF	5%	50V
C812	1-136-169-00	FILM	0.22µF	5%	50V
C813	1-137-374-11	FILM	0.047µF	5%	50V
C815	1-126-941-11	ELECT	470µF	20%	25V
C816	1-126-964-11	ELECT	10µF	20%	50V
C817	1-164-096-11	CERAMIC	0.01µF		50V
C818	1-126-933-11	ELECT	100µF	20%	16V
C819	1-126-964-11	ELECT	10µF	20%	50V
C820	1-102-114-00	CERAMIC	470PF	10%	50V
C821	1-130-495-00	MYLAR	0.1µF	5%	50V
C822	1-164-096-11	CERAMIC	0.01µF		50V
C823	1-101-880-00	CERAMIC	47PF	5%	50V
C825	1-104-665-11	ELECT	100µF	20%	25V
C826	1-136-165-00	FILM	0.1µF	5%	50V
C827	1-126-960-11	ELECT	1µF	20%	50V
C828	1-137-366-11	FILM	0.0022µF	5%	50V
C829	1-126-959-11	ELECT	0.47µF	20%	50V
C830	1-136-356-11	FILM	470PF	5%	50V
C831	1-126-960-11	ELECT	1µF	20%	50V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C832	1-126-960-11	ELECT	1µF	20%	50V
C833	1-126-960-11	ELECT	1µF	20%	50V
C834	1-104-665-11	ELECT	100µF	20%	25V
C835	1-104-664-11	ELECT	47µF	20%	25V
C836	1-136-169-00	FILM	0.22µF	5%	50V
C837	1-126-963-11	ELECT	4.7µF	20%	50V
C838	1-104-665-11	ELECT	100µF	20%	25V
C839	1-137-374-11	FILM	0.047µF	5%	50V
C840	1-104-665-11	ELECT	100µF	20%	25V
C841	1-137-374-11	FILM	0.047µF	5%	50V
C842	1-137-374-11	FILM	0.047µF	5%	50V
C843	1-104-665-11	ELECT	100µF	20%	25V
C844	1-126-933-11	ELECT	100µF	20%	16V
C845	1-126-933-11	ELECT	100µF	20%	16V
C846	1-126-933-11	ELECT	100µF	20%	16V
C847	1-126-933-11	ELECT	100µF	20%	16V
C848	1-126-933-11	ELECT	100µF	20%	16V
C851	1-137-374-11	FILM	0.047µF	5%	50V
C852	1-137-374-11	FILM	0.047µF	5%	50V
C853	1-137-374-11	FILM	0.047µF	5%	50V
C854	1-126-933-11	ELECT	100µF	20%	16V
C857	1-126-933-11	ELECT	100µF	20%	16V
C858	1-126-941-11	ELECT	470µF	20%	25V
C860	1-126-933-11	ELECT	100µF	20%	16V
C861	1-137-374-11	FILM	0.047µF	5%	50V
C862	1-137-374-11	FILM	0.047µF	5%	50V
C863	1-137-374-11	FILM	0.047µF	5%	50V
C864	1-126-933-11	ELECT	100µF	20%	16V
C865	1-130-471-00	MYLAR	0.001µF	5%	50V
C866	1-136-177-00	FILM	1µF	5%	50V
C867	1-101-880-00	CERAMIC	47PF	5%	50V
C868	1-101-880-00	CERAMIC	47PF	5%	50V
C869	1-130-487-00	MYLAR	0.022µF	5%	50V
	(KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND) /61S65)				
C869	1-130-489-00	MYLAR	0.033µF	5%	50V
			(KP-53S65 (US (N65A-B)))		
C871	1-101-880-00	CERAMIC	47PF	5%	50V
C872	1-101-880-00	CERAMIC	47PF	5%	50V
C873	1-101-880-00	CERAMIC	47PF	5%	50V
C880	1-126-961-11	ELECT	2.2µF	20%	50V
C881	1-102-973-00	CERAMIC	100PF	5%	50V
C882	1-102-973-00	CERAMIC	100PF	5%	50V
C883	1-102-973-00	CERAMIC	100PF	5%	50V
C885	1-126-961-11	ELECT	2.2µF	20%	50V
C886	1-102-973-00	CERAMIC	100PF	5%	50V
C887	1-102-973-00	CERAMIC	100PF	5%	50V
C888	1-102-973-00	CERAMIC	100PF	5%	50V
C889	1-126-941-11	ELECT	470µF	20%	25V
C897	1-126-941-11	ELECT	470µF	20%	25V

<CONNECTOR>

CN501		1-564-513-11	PLUG, CONNECTOR 10P
CN502	*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P
CN503	*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P
CN504	*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P
CN505	*	1-506-371-00	PIN, CONNECTOR 2P

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.		PART NO.	DESCRIPTION	REMARK
CN506	*	1-774-182-11	CONNECTOR, BOARD TO BOARD10P	
CN507	*	1-564-507-11	PLUG, CONNECTOR 4P	
CN601	*	1-580-843-11	PIN, CONNECTOR (POWER)	
CN651	*	1-774-182-11	CONNECTOR, BOARD TO BOARD10P	
CN652	*	1-774-182-11	CONNECTOR, BOARD TO BOARD10P	
CN653	*	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN801	*	1-564-507-11	PLUG, CONNECTOR 4P	
CN802	*	1-564-507-11	PLUG, CONNECTOR 4P	
CN803	*	1-564-507-11	PLUG, CONNECTOR 4P	
CN804	*	1-774-182-11	CONNECTOR, BOARD TO BOARD10P	
CN805	*	1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P	
CN806		1-695-915-11	TAB (CONTACT) (KP-53S65 (US))	
			<DIODE>	
D501		8-719-991-33	DIODE 1SS133T-77	
D502		8-719-991-33	DIODE 1SS133T-77	
D503		8-719-018-82	DIODE RGP02-20EL-6394	
D504		8-719-921-63	DIODE MTZJ-7.5B	
D507	⚠	8-719-302-43	DIODE EL1Z	
D508		8-719-900-26	DIODE ERD29-08J	
D509		8-719-945-80	DIODE ERC06-15S	
D510		8-719-945-80	DIODE ERC06-15S	
D511		8-719-302-43	DIODE EL1Z	
D513		8-719-302-43	DIODE EL1Z	
D514		8-719-908-03	DIODE GP08D	
D515		8-719-908-03	DIODE GP08D	
D517		8-719-018-82	DIODE RGP02-20EL-6394	
D519		8-719-991-33	DIODE 1SS133T-77	
D520		8-719-302-43	DIODE EL1Z	
D521		8-719-302-43	DIODE EL1Z	
D524		8-719-991-33	DIODE 1SS133T-77	
D527		8-719-109-85	DIODE RD5.1ESB2	
D528		8-719-923-86	DIODE MTZJ-T-77-15	
D602	⚠	8-719-052-84	DIODE LN4SB60	
D651		8-719-510-26	DIODE D1NL20-TA	
D652		8-719-991-33	DIODE 1SS133T-77	
D653		8-719-510-02	DIODE D1NS4	
D654		8-719-022-97	DIODE D2S4µF	
D655		8-719-061-56	DIODE RBA-402LLF-A	
D656		8-719-052-92	DIODE D10SBS4F	
D657		8-719-052-91	DIODE D4SBS4-F	
D658		8-719-510-12	DIODE D10SC4M	
D660		8-719-991-33	DIODE 1SS133T-77	
D661		8-719-200-82	DIODE 11ES2	
D662		8-719-991-33	DIODE 1SS133T-77	
D664		8-719-110-61	DIODE RD24ESB1	
D669		8-719-991-33	DIODE 1SS133T-77	
D670		8-719-921-86	DIODE MTZJ-13	
D691		8-719-200-82	DIODE 11ES2	
D692		8-719-200-82	DIODE 11ES2	
D693		8-719-200-82	DIODE 11ES2	
D694		8-719-200-82	DIODE 11ES2	
D801		8-719-110-17	DIODE RD10ESB2	
D802		8-719-110-17	DIODE RD10ESB2	
D803		8-719-110-17	DIODE RD10ESB2	
D804		8-719-110-17	DIODE RD10ESB2	
D809		8-719-991-33	DIODE 1SS133T-77	
D810		8-719-991-33	DIODE 1SS133T-77	
D820		8-719-109-68	DIODE RD3.6ESB1	
D828		8-719-109-89	DIODE RD5.6ESB2	
D829		8-719-109-85	DIODE RD5.1ESB2	
D835		8-719-109-89	DIODE RD5.6ESB2	
D840		8-719-991-33	DIODE 1SS133T-77	
D842		8-719-991-33	DIODE 1SS133T-77	
D845		8-719-991-33	DIODE 1SS133T-77	
D846		8-719-991-33	DIODE 1SS133T-77	
D847		8-719-982-19	DIODE MTZJ-30A	
D848		8-719-923-86	DIODE MTZJ-T-77-15	
D849		8-719-110-22	DIODE RD11ESB2	
D850		8-719-109-89	DIODE RD5.6ESB2	
D852		8-719-923-86	DIODE MTZJ-T-77-15	
D853		8-719-982-19	DIODE MTZJ-30A	
D854		8-719-982-19	DIODE MTZJ-30A	
D855		8-719-982-19	DIODE MTZJ-30A	
D856		1-164-096-11	CERAMIC 0.01µF 50V	
D857		8-719-982-19	DIODE MTZJ-30A	
D859		1-164-096-11	CERAMIC 0.01µF 50V	
D860		8-719-982-19	DIODE MTZJ-30A	
			<FUSE>	
F601	⚠	1-532-748-11	FUSE, GLASS TUBE 6.3A/125V	
		1-533-223-11	CLIP, FUSE	
			<FERRITE BEAD>	
FB501		1-410-397-21	FERRITE 1.1µH	
FB651		1-410-396-41	FERRITE 0.45µH	
FB652		1-410-396-41	FERRITE 0.45µH	
FB653		1-410-396-41	FERRITE 0.45µH	
FB654		1-410-397-21	FERRITE 1.1µH	
FB655		1-410-396-41	FERRITE 0.45µH	
FB656		1-410-396-41	FERRITE 0.45µH	
FB657		1-410-396-41	FERRITE 0.45µH	
FB660		1-412-761-11	FERRITE 0µH	
FB661		1-412-761-11	FERRITE 0µH	
			<IC>	
IC501		8-759-133-90	IC UPC339C	
IC601	⚠	8-729-041-12	TRANSISTOR MX0841AB-F	
IC651	⚠	1-810-051-11	POWER MODULE DM-48	
IC651		8-749-012-13	IC DM-58	
IC652		8-759-012-67	IC MC7905CT	
IC653		8-759-231-53	IC TA7805S	
IC654		8-759-231-53	IC TA7805S	
IC655		8-759-231-58	IC TA7812S	
IC801		8-759-327-51	IC PA0053B	
IC802		8-759-327-51	IC PA0053B	
IC803		8-759-183-37	IC CA0007AD	
IC804		8-759-464-79	IC PM0011AS	
IC805		8-759-711-28	IC NJM2058D	

G

• The components identified by ⋈ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.		PART NO.	DESCRIPTION			REMARK
IC806		8-759-464-79	IC PM0011AS			
IC808		8-759-464-79	IC PM0011AS			
IC809		8-749-014-37	IC STK392-150			
IC810		8-749-014-37	IC STK392-150			
IC811		8-759-634-51	IC M5218AP			
			<COIL>			
L502		1-410-478-11	INDUCTOR	47µH		
L503		1-459-111-00	INDUCTOR	0µH		
L506		1-412-552-11	INDUCTOR	2.2µµH		
L509		1-412-533-21	INDUCTOR	47µH		
L601	⚠	1-424-248-11	TRANSFORMER, LINE FILTER			
L651		1-414-158-11	INDUCTOR	2.2µH		
L652		1-414-158-11	INDUCTOR	2.2µH		
L653		1-414-158-11	INDUCTOR	2.2µH		
L654		1-414-158-11	INDUCTOR	2.2µH		
L656		1-412-523-11	INDUCTOR	6.8µH		
L801		1-406-975-21	INDUCTOR	0µH		
L802		1-406-975-21	INDUCTOR	0µH		
			<IC LINK>			
PS601	⚠	1-533-597-31	LINK, IC			
PS602	⚠	1-533-597-31	LINK, IC			
			<TRANSISTOR>			
Q501		8-729-119-80	TRANSISTOR 2SC2688-LK			
Q502		8-729-024-05	TRANSISTOR 2SD2348(LBSONY-1)			
Q503		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q504		8-729-823-81	TRANSISTOR 2SC4632LS-CB7			
Q505		8-729-931-45	TRANSISTOR IRF614			
Q506		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q507		8-729-032-61	TRANSISTOR 2SC5022-02			
Q651		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q652		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q653		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q654		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q655		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q656		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q657		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q658		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q659		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q660		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q661		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q662		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q802		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q803		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q804		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q805		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q809		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q810		8-729-119-78	TRANSISTOR 2SC2785-HFE			
			<RESISTOR>			
R501		1-249-421-11	CARBON	2.2K	5% 1/4W	

REF. NO.		PART NO.	DESCRIPTION			REMARK
R502		1-215-879-11	METAL OXIDE	47K	5% 1W	F
R503		1-247-843-11	CARBON	3.3K	5% 1/4W	
R504		1-249-419-11	CARBON	1.5K	5% 1/4W	
R505		1-247-895-91	CARBON	470K	5% 1/4W	
R506		1-249-429-11	CARBON	10K	5% 1/4W	
R507		1-249-422-11	CARBON	2.7K	5% 1/4W	
R508		1-260-337-11	CARBON	5.6K	5% 1/2W	
R509		1-249-437-11	CARBON	47K	5% 1/4W	
R510		1-215-919-11	METAL OXIDE	2.2K	5% 3W	F
R511		1-215-919-11	METAL OXIDE	2.2K	5% 3W	F
R512		1-216-482-11	METAL OXIDE	1.8K	5% 3W	F
R513		1-249-424-11	CARBON	3.9K	5% 1/4W	
⋈ R514	⚠		METAL		1/4W	
R516		1-215-443-00	METAL	8.2K	1% 1/4W	
R517		1-215-449-00	METAL	15K	1% 1/4W	
R518		1-215-456-00	METAL	30K	1% 1/4W	
R519		1-247-863-91	CARBON	22K	5% 1/4W	
R522		1-249-428-11	CARBON	8.2K	5% 1/4W	
R523		1-249-437-11	CARBON	47K	5% 1/4W	
R524		1-247-863-91	CARBON	22K	5% 1/4W	
R525		1-249-405-11	CARBON	100	5% 1/4W	F
R528		1-215-910-00	METAL OXIDE	68	5% 3W	F
R530		1-249-437-11	CARBON	47K	5% 1/4W	
R531		1-215-868-00	METAL OXIDE	680	5% 1W	F
R532		1-260-314-11	CARBON	68	5% 1/2W	
R533		1-214-912-00	METAL	91K	1% 1/2W	
R534		1-215-479-00	METAL	270K	1% 1/4W	
R535		1-247-887-00	CARBON	220K	5% 1/4W	
R536		1-260-288-11	CARBON	0.47	5% 1/2W	
R537		1-260-336-11	CARBON	4.7K	5% 1/2W	
R538		1-247-863-91	CARBON	22K	5% 1/4W	
R539		1-249-377-11	CARBON	0.47	5% 1/4W	F
R540		1-249-377-11	CARBON	0.47	5% 1/4W	F
				(KP-53S65 (US (N65A-B)))		
R540		1-249-379-11	CARBON	0.68	5% 1/4W	F
			(KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND)/61S65)			
R541		1-260-087-11	CARBON	100	5% 1/2W	
R542		1-215-862-11	METAL OXIDE	68	5% 1W	F
			(KP-41T65/48S65/53S65 (US (N65A-A)/61S65)			
R542		1-215-864-00	METAL OXIDE	150	5% 1W	F
			(KP-46C65/53S65 (US (N65A-B), CND))			
R543		1-216-349-00	METAL OXIDE	1	5% 1W	F
R544		1-215-862-11	METAL OXIDE	68	5% 1W	F
			(KP-41T65/48S65/53S65 (US (N65A-A)/61S65)			
R544		1-215-864-00	METAL OXIDE	150	5% 1W	F
			(KP-46C65/53S65 (US (N65A-B), CND))			
R545		1-249-377-11	CARBON	0.47	5% 1/4W	F
R546		1-249-377-11	CARBON	0.47	5% 1/4W	F
R547		1-247-807-31	CARBON	100	5% 1/4W	
R548		1-249-413-11	CARBON	470	5% 1/4W	
R549		1-247-863-91	CARBON	22K	5% 1/4W	
R550		1-247-807-31	CARBON	100	5% 1/4W	
R551		1-249-437-11	CARBON	47K	5% 1/4W	
R552		1-247-807-31	CARBON	100	5% 1/4W	
R553		1-247-881-00	CARBON	120K	5% 1/4W	
R554		1-249-405-11	CARBON	100	5% 1/4W	F

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

- The components identified by ⋈ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

G

REF. NO.		PART NO.	DESCRIPTION			REMARK
R556		1-260-117-11	CARBON	33K	5%	1/2W
			(KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND)/61S65)			
R556		1-260-123-11	CARBON	100K	5%	1/2W
			(KP-53S65 (US (N65A-B)))			
R557		1-216-490-11	METAL OXIDE	39K	5%	3W F
R558		1-216-490-11	METAL OXIDE	39K	5%	3W F
R559		1-216-490-11	METAL OXIDE	39K	5%	3W F
R560		1-215-399-00	METAL	120	1%	1/4W
⋈ R561	⚠		METAL			1/4W
R563		1-249-429-11	CARBON	10K	5%	1/4W
R564		1-260-131-11	CARBON	470K	5%	1/2W
R565		1-260-087-11	CARBON	100	5%	1/2W
R566		1-249-377-11	CARBON	0.47	5%	1/4W F
R567		1-249-377-11	CARBON	0.47	5%	1/4W F
R568		1-247-903-00	CARBON	1M	5%	1/4W
R569		1-216-390-11	METAL OXIDE	1.2	5%	3W F
			(KP-53S65 (US (N65A-B)))			
R569		1-216-392-11	METAL OXIDE	1.8	5%	3W F
			(KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND)/61S65)			
R570		1-215-910-00	METAL OXIDE	68	5%	3W F
R571		1-249-422-11	CARBON	2.7K	5%	1/4W
R572		1-247-895-91	CARBON	470K	5%	1/4W
R573		1-249-430-11	CARBON	12K	5%	1/4W
R574		1-249-429-11	CARBON	10K	5%	1/4W
R577		1-249-422-11	CARBON	2.7K	5%	1/4W
R579		1-247-895-91	CARBON	470K	5%	1/4W
R580		1-247-863-91	CARBON	22K	5%	1/4W
R581		1-249-428-11	CARBON	8.2K	5%	1/4W
R583		1-249-428-11	CARBON	8.2K	5%	1/4W
R584		1-247-887-00	CARBON	220K	5%	1/4W
R585		1-216-490-11	METAL OXIDE	39K	5%	3W F
R586		1-260-292-11	CARBON	1	5%	1/2W
R588		1-247-863-91	CARBON	22K	5%	1/4W
R589		1-247-887-00	CARBON	220K	5%	1/4W
R591		1-215-917-11	METAL OXIDE	1K	5%	3W F
R601	⚠	1-219-512-11	CARBON	2.2M	5%	1/2W
R602	⚠	1-202-981-11	CEMENTED	0.82	5%	20W
R608	⚠	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R609		1-247-887-00	CARBON	220K	5%	1/4W
R610		1-247-887-00	CARBON	220K	5%	1/4W
R611		1-216-353-00	METAL OXIDE	2.2	5%	1W F
R612		1-247-887-00	CARBON	220K	5%	1/4W
R613		1-216-353-00	METAL OXIDE	2.2	5%	1W F
R614		1-247-887-00	CARBON	220K	5%	1/4W
R651		1-249-429-11	CARBON	10K	5%	1/4W
R653		1-249-377-11	CARBON	0.47	5%	1/4W F
R655		1-247-887-00	CARBON	220K	5%	1/4W
R656		1-260-288-11	CARBON	0.47	5%	1/2W
R657		1-249-429-11	CARBON	10K	5%	1/4W
R658		1-249-417-11	CARBON	1K	5%	1/4W
R660		1-249-413-11	CARBON	470	5%	1/4W
R661		1-249-417-11	CARBON	1K	5%	1/4W F
R662		1-249-425-11	CARBON	4.7K	5%	1/4W
R664		1-249-425-11	CARBON	4.7K	5%	1/4W
R665		1-247-807-31	CARBON	100	5%	1/4W
R667		1-249-417-11	CARBON	1K	5%	1/4W
R668		1-249-377-11	CARBON	0.47	5%	1/4W F
R669		1-249-429-11	CARBON	10K	5%	1/4W
R672		1-249-421-11	CARBON	2.2K	5%	1/4W
R673		1-249-413-11	CARBON	470	5%	1/4W
R675		1-215-417-00	METAL	680	1%	1/4W
R676		1-216-369-00	METAL OXIDE	1	5%	2W F
R677		1-247-807-31	CARBON	100	5%	1/4W
R679		1-249-421-11	CARBON	2.2K	5%	1/4W
R680		1-249-417-11	CARBON	1K	5%	1/4W
R681		1-249-417-11	CARBON	1K	5%	1/4W
R682		1-249-417-11	CARBON	1K	5%	1/4W
R683		1-249-417-11	CARBON	1K	5%	1/4W
R684		1-249-417-11	CARBON	1K	5%	1/4W
R686		1-215-421-00	METAL	1K	1%	1/4W
R687		1-215-441-00	METAL	6.8K	1%	1/4W
R688		1-215-481-00	METAL	330K	1%	1/4W
R689		1-249-425-11	CARBON	4.7K	5%	1/4W
R690		1-249-417-11	CARBON	1K	5%	1/4W
R692		1-249-425-11	CARBON	4.7K	5%	1/4W
R693		1-249-429-11	CARBON	10K	5%	1/4W
R695		1-247-807-31	CARBON	100	5%	1/4W
R696		1-249-417-11	CARBON	1K	5%	1/4W
R697		1-249-417-11	CARBON	1K	5%	1/4W
R801		1-249-437-11	CARBON	47K	5%	1/4W
R803		1-249-430-11	CARBON	12K	5%	1/4W
R804		1-249-429-11	CARBON	10K	5%	1/4W
R805		1-247-807-31	CARBON	100	5%	1/4W
R806		1-249-429-11	CARBON	10K	5%	1/4W
R807		1-247-807-31	CARBON	100	5%	1/4W
R808		1-249-429-11	CARBON	10K	5%	1/4W
R809		1-249-425-11	CARBON	4.7K	5%	1/4W
R810		1-247-807-31	CARBON	100	5%	1/4W
R811		1-247-807-31	CARBON	100	5%	1/4W
R812		1-249-429-11	CARBON	10K	5%	1/4W
R813		1-249-429-11	CARBON	10K	5%	1/4W
R814		1-247-807-31	CARBON	100	5%	1/4W
R815		1-247-807-31	CARBON	100	5%	1/4W
R816		1-247-807-31	CARBON	100	5%	1/4W
R817		1-247-807-31	CARBON	100	5%	1/4W
R818		1-249-430-11	CARBON	12K	5%	1/4W
R820		1-249-429-11	CARBON	10K	5%	1/4W
R821		1-249-428-11	CARBON	8.2K	5%	1/4W
R822		1-249-417-11	CARBON	1K	5%	1/4W
R823		1-249-417-11	CARBON	1K	5%	1/4W
R824		1-215-462-00	METAL	51K	1%	1/4W
R825		1-249-441-11	CARBON	100K	5%	1/4W
R826		1-215-462-00	METAL	51K	1%	1/4W
R827		1-249-417-11	CARBON	1K	5%	1/4W
R828		1-249-426-11	CARBON	5.6K	5%	1/4W
R829		1-249-426-11	CARBON	5.6K	5%	1/4W
R830		1-249-414-11	CARBON	560	5%	1/4W
R831		1-249-414-11	CARBON	560	5%	1/4W
R832		1-249-441-11	CARBON	100K	5%	1/4W
R833		1-249-417-11	CARBON	1K	5%	1/4W
R834		1-249-441-11	CARBON	100K	5%	1/4W
R835		1-249-441-11	CARBON	100K	5%	1/4W
R836		1-247-807-31	CARBON	100	5%	1/4W
R837		1-249-441-11	CARBON	100K	5%	1/4W

G

REF. NO.	PART NO.	DESCRIPTION			REMARK
R838	1-249-421-11	CARBON	2.2K	5%	1/4W
R841	1-247-815-91	CARBON	220	5%	1/4W
R842	1-247-807-31	CARBON	100	5%	1/4W
R843	1-247-807-31	CARBON	100	5%	1/4W
R844	1-247-807-31	CARBON	100	5%	1/4W
R845	1-249-441-11	CARBON	100K	5%	1/4W
R846	1-247-807-31	CARBON	100	5%	1/4W
R847	1-215-469-00	METAL	100K	1%	1/4W
R850	1-215-469-00	METAL	100K	1%	1/4W
R851	1-247-807-31	CARBON	100	5%	1/4W
R852	1-247-807-31	CARBON	100	5%	1/4W
R853	1-247-887-00	CARBON	220K	5%	1/4W
R854	1-249-429-11	CARBON	10K	5%	1/4W
R855	1-247-815-91	CARBON	220	5%	1/4W
R856	1-247-807-31	CARBON	100	5%	1/4W
R857	1-247-807-31	CARBON	100	5%	1/4W
R858	1-215-455-00	METAL	27K	1%	1/4W
R859	1-215-455-00	METAL	27K	1%	1/4W
R860	1-215-455-00	METAL	27K	1%	1/4W
R861	1-215-455-00	METAL	27K	1%	1/4W
R862	1-215-455-00	METAL	27K	1%	1/4W
R863	1-215-455-00	METAL	27K	1%	1/4W
R865	1-249-424-11	CARBON	3.9K	5%	1/4W
R867	1-215-461-00	METAL	47K	1%	1/4W
R868	1-215-445-00	METAL	10K	1%	1/4W
R869	1-249-425-11	CARBON	4.7K	5%	1/4W
R871	1-249-417-11	CARBON	1K	5%	1/4W
R872	1-249-425-11	CARBON	4.7K	5%	1/4W
R873	1-247-807-31	CARBON	100	5%	1/4W
R874	1-249-429-11	CARBON	10K	5%	1/4W
R875	1-249-441-11	CARBON	100K	5%	1/4W
R876	1-215-451-00	METAL	18K	1%	1/4W
R879	1-215-444-00	METAL	9.1K	1%	1/4W
R881	1-249-408-11	CARBON	180	5%	1/4W
R882	1-215-445-00	METAL	10K	1%	1/4W
R883	1-215-445-00	METAL	10K	1%	1/4W
R884	1-215-445-00	METAL	10K	1%	1/4W
R885	1-249-441-11	CARBON	100K	5%	1/4W
R886	1-249-428-11	CARBON	8.2K	5%	1/4W
R887	1-247-807-31	CARBON	100	5%	1/4W
R888	1-247-807-31	CARBON	100	5%	1/4W
R889	1-249-438-11	CARBON	56K	5%	1/4W
R890	1-249-441-11	CARBON	100K	5%	1/4W
R891	1-249-429-11	CARBON	10K	5%	1/4W
R892	1-215-445-00	METAL	10K	1%	1/4W
R895	1-249-421-11	CARBON	2.2K	5%	1/4W
R896	1-249-441-11	CARBON	100K	5%	1/4W
R897	1-247-807-31	CARBON	100	5%	1/4W
R898	1-247-815-91	CARBON	220	5%	1/4W
R899	1-247-815-91	CARBON	220	5%	1/4W
R901	1-249-430-11	CARBON	12K	5%	1/4W
R902	1-249-438-11	CARBON	56K	5%	1/4W
R903	1-215-421-00	METAL	1K	1%	1/4W
R904	1-214-800-11	METAL	2.2	1%	1/2W
R905	1-214-800-11	METAL	2.2	1%	1/2W
R906	1-214-800-11	METAL	2.2	1%	1/2W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R907	1-247-815-91	CARBON	220	5%	1/4W
R908	1-247-815-91	CARBON	220	5%	1/4W
R909	1-215-421-00	METAL	1K	1%	1/4W
R910	1-215-421-00	METAL	1K	1%	1/4W
R911	1-215-455-00	METAL	27K	1%	1/4W
R912	1-215-469-00	METAL	100K	1%	1/4W
R913	1-215-455-00	METAL	27K	1%	1/4W
R914	1-215-455-00	METAL	27K	1%	1/4W
R915	1-215-455-00	METAL	27K	1%	1/4W
R916	1-215-455-00	METAL	27K	1%	1/4W
R917	1-215-455-00	METAL	27K	1%	1/4W
R918	1-215-455-00	METAL	27K	1%	1/4W
R919	1-249-435-11	CARBON	33K	5%	1/4W
R920	1-214-800-11	METAL	2.2	1%	1/2W
R921	1-249-429-11	CARBON	10K	5%	1/4W (KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND)/61S65)
R921	1-249-431-11	CARBON	15K	5%	1/4W (KP-53S65 (US (N65A-B)))
R922	1-215-445-00	METAL	10K	1%	1/4W
R923	1-249-425-11	CARBON	4.7K	5%	1/4W
R924	1-215-444-00	METAL	9.1K	1%	1/4W
R925	1-249-425-11	CARBON	4.7K	5%	1/4W
R926	1-249-408-11	CARBON	180	5%	1/4W
R927	1-215-445-00	METAL	10K	1%	1/4W
R928	1-215-445-00	METAL	10K	1%	1/4W
R929	1-214-800-11	METAL	2.2	1%	1/2W
R930	1-214-800-11	METAL	2.2	1%	1/2W
R931	1-215-445-00	METAL	10K	1%	1/4W
R933	1-215-453-00	METAL	22K	1%	1/4W
R934	1-249-429-11	CARBON	10K	5%	1/4W
R935	1-249-429-11	CARBON	10K	5%	1/4W
R936	1-249-429-11	CARBON	10K	5%	1/4W
R937	1-249-435-11	CARBON	33K	5%	1/4W
R938	1-215-421-00	METAL	1K	1%	1/4W
R940	1-249-441-11	CARBON	100K	5%	1/4W
R941	1-249-441-11	CARBON	100K	5%	1/4W
R942	1-249-421-11	CARBON	2.2K	5%	1/4W
R943	1-249-441-11	CARBON	100K	5%	1/4W
R944	1-215-421-00	METAL	1K	1%	1/4W
R945	1-249-429-11	CARBON	10K	5%	1/4W
R946	1-215-421-00	METAL	1K	1%	1/4W
R947	1-249-441-11	CARBON	100K	5%	1/4W
R948	1-247-815-91	CARBON	220	5%	1/4W
R949	1-247-807-31	CARBON	100	5%	1/4W
R950	1-247-807-31	CARBON	100	5%	1/4W
R951	1-247-807-31	CARBON	100	5%	1/4W
R952	1-247-807-31	CARBON	100	5%	1/4W
R953	1-247-863-91	CARBON	22K	5%	1/4W
R954	1-215-433-00	METAL	3.3K	1%	1/4W
R955	1-215-433-00	METAL	3.3K	1%	1/4W
R956	1-249-429-11	CARBON	10K	5%	1/4W
R957	1-214-800-11	METAL	2.2	1%	1/2W
R958	1-214-800-11	METAL	2.2	1%	1/2W
R959	1-215-433-00	METAL	3.3K	1%	1/4W
R960	1-215-451-00	METAL	18K	1%	1/4W
R961	1-249-425-11	CARBON	4.7K	5%	1/4W
R962	1-214-800-11	METAL	2.2	1%	1/2W

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R963	1-214-800-11	METAL	2.2	1%	1/2W
R964	1-215-433-00	METAL	3.3K	1%	1/4W
R965	1-215-433-00	METAL	3.3K	1%	1/4W
R966	1-247-815-91	CARBON	220	5%	1/4W
R967	1-215-455-00	METAL	27K	1%	1/4W
R968	1-215-455-00	METAL	27K	1%	1/4W
R969	1-215-455-00	METAL	27K	1%	1/4W
R970	1-215-455-00	METAL	27K	1%	1/4W
R971	1-215-455-00	METAL	27K	1%	1/4W
R972	1-215-455-00	METAL	27K	1%	1/4W
R973	1-214-800-11	METAL	2.2	1%	1/2W
R974	1-215-463-00	METAL	56K	1%	1/4W
R975	1-214-800-11	METAL	2.2	1%	1/2W
R976	1-215-433-00	METAL	3.3K	1%	1/4W
R977	1-247-815-91	CARBON	220	5%	1/4W
R978	1-215-445-00	METAL	10K	1%	1/4W
R979	1-249-425-11	CARBON	4.7K	5%	1/4W
R980	1-247-815-91	CARBON	220	5%	1/4W
R981	1-247-815-91	CARBON	220	5%	1/4W
R983	1-247-815-91	CARBON	220	5%	1/4W
R984	1-215-444-00	METAL	9.1K	1%	1/4W
R985	1-215-445-00	METAL	10K	1%	1/4W
R986	1-215-451-00	METAL	18K	1%	1/4W
R987	1-249-408-11	CARBON	180	5%	1/4W
R988	1-215-445-00	METAL	10K	1%	1/4W
R989	1-249-425-11	CARBON	4.7K	5%	1/4W
R990	1-249-429-11	CARBON	10K	5%	1/4W
R991	1-249-429-11	CARBON	10K	5%	1/4W
R993	1-249-425-11	CARBON	4.7K	5%	1/4W
R996	1-247-815-91	CARBON	220	5%	1/4W
R997	1-215-445-00	METAL	10K	1%	1/4W
R998	1-249-434-11	CARBON	27K	5%	1/4W
R999	1-249-434-11	CARBON	27K	5%	1/4W
		<RELAY>			
RY601	1-755-018-11	RELAY			
		<SPARK GAP>			
SG501	1-519-466-11	GAP, SPARK (KP-53S65 (US))			
SG502	1-519-466-11	GAP, SPARK (KP-53S65 (US))			
		<TRANSFORMER>			
T501	⚠ 1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE			
T502	⚠ 1-431-896-11	TRANSFORMER, FERRITE (PMT)			
T503	⚠ 1-431-212-11	TRANSFORMER, HORIZONTAL LINEAR			
T504	⚠ 1-453-238-11	TRANSFORMER ASSY, FLYBACK			(NX-4007//X4A4)
T603	⚠ 1-423-665-11	TRANSFORMER, POWER			
T604	⚠ 1-429-992-11	TRANSFORMER, CONVERTER (PRT)			
T605	⚠ 1-429-985-11	TRANSFORMER, CONVERTER (PIT)			

****

REF. NO.	PART NO.	DESCRIPTION			REMARK
*	A-1331-777-A	CR BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C702	1-102-959-00	CERAMIC	22PF	5%	50V
C703	1-104-664-11	ELECT	47µF	20%	25V
C704	1-126-964-11	ELECT	10µF	20%	50V
C705	1-161-754-00	CERAMIC	0.001µF	10%	2KV
C706	1-126-934-11	ELECT	220µF	20%	16V
C707	1-107-504-11	CERAMIC	10PF	0.5PF	500V
C708	1-102-050-00	CERAMIC	0.01µF	99%	500V
C709	1-162-115-00	CERAMIC	330PF	10%	2KV
C712	1-107-662-11	ELECT	22µF	20%	250V
		<CONNECTOR>			
CN701	1-695-915-11	TAB (CONTACT)			
CN702 *	1-564-510-11	PLUG, CONNECTOR 7P			
CN703 *	1-564-512-11	PLUG, CONNECTOR 9P			
CN704 *	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CN705 ⚠	1-251-182-11	SOCKET, CRT			
CN706 *	1-564-512-11	PLUG, CONNECTOR 9P			
CN707	1-695-915-11	TAB (CONTACT) (KP-53S65 (US))			
		<DIODE>			
D701	8-719-991-33	DIODE 1SS133T-77			
D702	8-719-991-33	DIODE 1SS133T-77			
D703	8-719-991-33	DIODE 1SS133T-77			
D704	8-719-991-33	DIODE 1SS133T-77			
D705	8-719-923-86	DIODE MTZJ-T-77-15			
D706	8-719-923-86	DIODE MTZJ-T-77-15			
D708	8-719-110-17	DIODE RD10ESB2			
D709	8-719-109-89	DIODE RD5.6ESB2			
D710	8-719-991-33	DIODE 1SS133T-77			
		<IC>			
IC701	8-759-434-39	IC TDA6106Q			
		<COIL>			
L701	1-410-682-31	INDUCTOR	470µH		
		<TRANSISTOR>			
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q702	8-729-119-76	TRANSISTOR 2SA1175-HFE			
		<RESISTOR>			
R701	1-219-743-11	CARBON	100	5%	1/2W
R702	1-215-425-00	METAL	1.5K	1%	1/4W
R703	1-215-437-00	METAL	4.7K	1%	1/4W
R704	1-260-132-11	CARBON	560K	5%	1/2W
R705	1-215-424-00	METAL	1.3K	1%	1/4W

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R706	1-215-437-00	METAL	4.7K	1%	1/4W
R707	1-249-435-11	CARBON	33K	5%	1/4W
R708	1-215-428-00	METAL	2K	1%	1/4W
R709	1-260-101-11	CARBON	1.5K	5%	1/2W
R710	1-215-903-11	METAL OXIDE	68K	5%	2W F
R711	1-249-435-11	CARBON	33K	5%	1/4W
R712	1-247-807-31	CARBON	100	5%	1/4W
R713	1-249-437-11	CARBON	47K	5%	1/4W
R714	1-260-099-11	CARBON	1K	5%	1/2W
R715	1-260-133-11	CARBON	680K	5%	1/2W
R717	1-249-417-11	CARBON	1K	5%	1/4W
R718	1-247-807-31	CARBON	100	5%	1/4W
R719	1-260-087-11	CARBON	100	5%	1/2W
		<SPARK GAP>			
SG701	1-519-422-11	GAP, SPARK			
SG702	1-519-422-11	GAP, SPARK			
**********					
*	A-1331-778-A	CG BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C732	1-102-963-00	CERAMIC	33PF	5%	50V
C733	1-161-754-00	CERAMIC	0.001µF	10%	2KV
C735	1-102-050-00	CERAMIC	0.01µF	99%	500V
C736	1-162-115-00	CERAMIC	330PF	10%	2KV
C737	1-107-662-11	ELECT	22µF	20%	250V
		<CONNECTOR>			
CN731	1-695-915-11	TAB (CONTACT)			
CN732 *	1-564-510-11	PLUG, CONNECTOR 7P			
CN733 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN734 *	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CN735 ⚠	1-251-182-11	SOCKET, CRT			
CN736 *	1-564-512-11	PLUG, CONNECTOR 9P			
CN737 *	1-564-512-11	PLUG, CONNECTOR 9P			
CN738	1-695-915-11	TAB (CONTACT) (KP-53S65 (US))			
		<DIODE>			
D731	8-719-991-33	DIODE 1SS133T-77			
D732	8-719-991-33	DIODE 1SS133T-77			
D733	8-719-110-17	DIODE RD10ESB2			
		<IC>			
IC731	8-759-434-39	IC TDA6106Q			
		<COIL>			
L731	1-410-682-31	INDUCTOR	470µH		

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R731	1-219-743-11	CARBON	100	5%	1/2W
	(KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND)/61S65)				
R731	1-219-745-11	CARBON	470	5%	1/2W
	(KP-53S65 (US (N65A-B)))				
R732	1-260-132-11	CARBON	560K	5%	1/2W
R733	1-215-421-00	METAL	1K	1%	1/4W
R735	1-249-441-11	CARBON	100K	5%	1/4W
R736	1-215-430-00	METAL	2.4K	1%	1/4W
R737	1-260-101-11	CARBON	1.5K	5%	1/2W
R738	1-215-903-11	METAL OXIDE	68K	5%	2W F
R739	1-260-133-11	CARBON	680K	5%	1/2W
R740	1-260-099-11	CARBON	1K	5%	1/2W
R741	1-215-435-00	METAL	3.9K	1%	1/4W
R742	1-247-885-00	CARBON	180K	5%	1/4W
R743	1-247-807-31	CARBON	100	5%	1/4W
		<SPARK GAP>			
SG731	1-519-422-11	GAP, SPARK			
SG732	1-519-422-11	GAP, SPARK			
**********					
*	A-1331-779-A	CB BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C762	1-102-963-00	CERAMIC	33PF	5%	50V
C763	1-161-754-00	CERAMIC	0.001µF	10%	2KV
C765	1-102-050-00	CERAMIC	0.01µF	99%	500V
C766	1-162-115-00	CERAMIC	330PF	10%	2KV
C767	1-107-662-11	ELECT	22µF	20%	250V
		<CONNECTOR>			
CN761	1-695-915-11	TAB (CONTACT)			
CN762 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN763 *	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CN764 ⚠	1-251-182-11	SOCKET, CRT			
CN765 *	1-564-512-11	PLUG, CONNECTOR 9P			
CN766	1-564-513-11	PLUG, CONNECTOR 10P			
CN767	1-695-915-11	TAB (CONTACT) (KP-53S65 (US))			
		<DIODE>			
D761	8-719-991-33	DIODE 1SS133T-77			
D762	8-719-923-86	DIODE MTZJ-T-77-15			
D763	8-719-110-17	DIODE RD10ESB2			
D764	8-719-923-86	DIODE MTZJ-T-77-15			
		<IC>			
IC761	8-759-434-39	IC TDA6106Q			

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<COIL>			
L761	1-410-682-31	INDUCTOR	470µH		
		<RESISTOR>			
R761	1-219-743-11	CARBON	100	5%	1/2W
		(KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND)/61S65)			
R761	1-219-745-11	CARBON	470	5%	1/2W
		(KP-53S65 (US (N65A-B)))			
R762	1-260-132-11	CARBON	560K	5%	1/2W
R763	1-215-420-00	METAL	910	1%	1/4W
R764	1-249-426-11	CARBON	5.6K	5%	1/4W
R765	1-215-430-00	METAL	2.4K	1%	1/4W
R766	1-260-101-11	CARBON	1.5K	5%	1/2W
R767	1-215-903-11	METAL OXIDE	68K	5%	2W F
R768	1-260-133-11	CARBON	680K	5%	1/2W
R769	1-260-099-11	CARBON	1K	5%	1/2W
R770	1-247-807-31	CARBON	100	5%	1/4W
R771	1-260-087-11	CARBON	100	5%	1/2W
		<SPARK GAP>			
SG761	1-519-422-11	GAP, SPARK			
SG762	1-519-422-11	GAP, SPARK			
**********					
*	A-1372-441-A	HA BOARD, COMPLETE			
		**********			
*	A-1372-474-A	HA MOUNT (VAR)			
		<CAPACITOR>			
C1301	1-130-495-00	FILM	0.1µF	5%	50V
C1302	1-126-959-11	ELECT	0.47µF	20%	50V
C1304	1-126-964-11	ELECT	10µF	20%	50V
C1305	1-130-495-00	FILM	0.1µF	5%	50V
C1306	1-126-964-11	ELECT	10µF	20%	50V
C1307	1-126-964-11	ELECT	10µF	20%	50V
		<CONNECTOR>			
CN1301	1-564-523-11	PLUG, CONNECTOR 8P			
CN1302 *	1-564-526-11	PLUG, CONNECTOR 11P			
CN1304 *	1-564-518-11	PLUG, CONNECTOR 3P			
		<DIODE>			
D1301	8-719-110-17	DIODE RD10ESB2			
D1302	8-719-110-17	DIODE RD10ESB2			
D1303	8-719-110-17	DIODE RD10ESB2			
D1304	8-719-053-43	DIODE SLR-325VCT31			
D1305	8-719-053-43	DIODE SLR-325VCT31			
D1306	8-719-110-17	DIODE RD10ESB2			
D1307	8-719-110-17	DIODE RD10ESB2			
D1308	8-719-110-17	DIODE RD10ESB2			
D1309	8-719-109-89	DIODE RD5.6ESB2			
		<IC>			
IC1301	8-742-088-10	HYB IC SBX1780-51(10)			
		<JACK>			
J1301	1-770-361-11	TERMINAL BLOCK, S			
		<RESISTOR>			
R1301	1-249-425-11	CARBON	4.7K	5%	1/4W
R1302	1-249-416-11	CARBON	820	5%	1/4W
R1303	1-249-417-11	CARBON	1K	5%	1/4W
R1304	1-249-425-11	CARBON	4.7K	5%	1/4W
R1305	1-247-815-91	CARBON	220	5%	1/4W
R1306	1-247-815-91	CARBON	220	5%	1/4W
R1307	1-249-420-11	CARBON	1.8K	5%	1/4W
R1308	1-247-895-91	CARBON	470K	5%	1/4W
R1309	1-247-895-91	CARBON	470K	5%	1/4W
R1310	1-249-429-11	CARBON	10K	5%	1/4W
R1311	1-247-804-11	CARBON	75	5%	1/4W
R1312	1-247-804-11	CARBON	75	5%	1/4W
R1314	1-247-807-31	CARBON	100	5%	1/4W
R1315	1-247-804-11	CARBON	75	5%	1/4W
		<SWITCH>			
S1301	1-572-198-11	SWITCH, KEYBOARD			
S1302	1-572-198-11	SWITCH, KEYBOARD			
S1303	1-572-198-11	SWITCH, KEYBOARD			
S1304	1-572-198-11	SWITCH, KEYBOARD			
S1305	1-572-198-11	SWITCH, KEYBOARD			
S1306	1-572-198-11	SWITCH, KEYBOARD			
S1307	1-572-198-11	SWITCH, KEYBOARD			
**********					
*	A-1390-826-A	Z BOARD, COMPLETE			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C1433	1-106-343-00	MYLAR	0.001µF	10%	200V
C1434	1-106-383-00	MYLAR	0.047µF	10%	200V
C1435	1-107-667-11	ELECT	2.2µF	20%	160V
C1436	1-137-364-11	FILM	0.001µF	5%	50V
C1437	1-137-364-11	FILM	0.001µF	5%	50V
C1438	1-106-383-00	MYLAR	0.047µF	10%	200V
C1439	1-161-830-00	CERAMIC	0.0047µF	500V	
C1440	1-126-933-11	ELECT	100µF	20%	16V
C1441	1-102-074-00	CERAMIC	0.001µF	10%	50V
C1443	1-126-935-11	ELECT	470µF	20%	16V

Z

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
C1444	1-107-639-11	ELECT	47µF	20%	160V
C1445	1-126-933-11	ELECT	100µF	20%	16V
C1446	1-126-933-11	ELECT	100µF	20%	16V
		<CONNECTOR>			
CN1401 *	1-564-506-11	PLUG, CONNECTOR 3P			
CN1402	1-564-505-11	PLUG, CONNECTOR 2P			
CN1403 *	1-564-506-11	PLUG, CONNECTOR 3P			
CN1404 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN1406 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN1431 *	1-564-508-11	PLUG, CONNECTOR 5P			
CN1433 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN1434 *	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P			
CN1461 *	1-564-506-11	PLUG, CONNECTOR 3P			
CN1462 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN1463	1-564-505-11	PLUG, CONNECTOR 2P			
CN1464 *	1-564-507-11	PLUG, CONNECTOR 4P			
		<DIODE>			
D1431	8-719-110-88	DIODE RD39ESB2			
D1432	8-719-110-88	DIODE RD39ESB2			
D1433	8-719-991-33	DIODE 1SS133T-77			
		<CONNECTOR>			
DY1431	1-451-454-11	DEFLECTION YOKE			
		<COIL>			
L1431	1-410-478-11	INDUCTOR	47µH		
L1432	1-410-478-11	INDUCTOR	47µH		
		<TRANSISTOR>			
Q1431	8-729-017-06	TRANSISTOR 2SC4793			
Q1432	8-729-017-05	TRANSISTOR 2SA1837			
Q1433	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q1434	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1435	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1436	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		<RESISTOR>			
R1401	1-249-414-11	CARBON	560	5%	1/4W
R1402	1-249-414-11	CARBON	560	5%	1/4W
R1415	1-216-475-11	METAL OXIDE	120	5%	3W F
R1418	1-216-475-11	METAL OXIDE	120	5%	3W F
R1431	1-249-414-11	CARBON	560	5%	1/4W
R1432	1-249-414-11	CARBON	560	5%	1/4W
R1435	1-216-475-11	METAL OXIDE	120	5%	3W F
R1436	1-216-475-11	METAL OXIDE	120	5%	3W F
R1437	1-249-414-11	CARBON	560	5%	1/4W
R1438	1-249-432-11	CARBON	18K	5%	1/4W
R1439	1-249-432-11	CARBON	18K	5%	1/4W
R1440	1-249-414-11	CARBON	560	5%	1/4W F
R1441	1-249-417-11	CARBON	1K	5%	1/4W
R1442	1-249-408-11	CARBON	180	5%	1/4W
R1443	1-249-377-11	CARBON	0.47	5%	1/4W F
R1445	1-249-403-11	CARBON	68	5%	1/4W
R1448	1-249-416-11	CARBON	820	5%	1/4W
R1449	1-249-403-11	CARBON	68	5%	1/4W
R1450	1-249-417-11	CARBON	1K	5%	1/4W
R1451	1-249-411-11	CARBON	330	5%	1/4W
R1452	1-249-417-11	CARBON	1K	5%	1/4W
R1453	1-249-401-11	CARBON	47	5%	1/4W
R1454	1-260-311-11	CARBON	39	5%	1/2W
R1455	1-249-384-11	CARBON	1.8	5%	1/4W F
R1456	1-215-916-00	METAL OXIDE	680	5%	3W F
R1457	1-249-417-11	CARBON	1K	5%	1/4W F
R1458	1-249-384-11	CARBON	1.8	5%	1/4W F
R1459	1-249-400-11	CARBON	39	5%	1/4W F
R1460	1-215-916-00	METAL OXIDE	680	5%	3W F
R1461	1-249-414-11	CARBON	560	5%	1/4W
R1462	1-249-414-11	CARBON	560	5%	1/4W
R1464	1-249-417-11	CARBON	1K	5%	1/4W
R1465	1-216-475-11	METAL OXIDE	120	5%	3W F
R1466	1-216-475-11	METAL OXIDE	120	5%	3W F

****

MISCELLANEOUS
****

⚠	A-1501-310-A	COUPLER (R) ASSY, PICTURE TUBE (KP-53S65(US (N65A-B)))
⚠	A-1501-311-A	COUPLER (B) ASSY, PICTURE TUBE (KP-53S65(US (N65A-B)))
⚠	A-1501-312-A	COUPLER (G) ASSY, PICTURE TUBE (KP-53S65(US (N65A-B)))
⚠	1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)
⚠	1-451-454-11	DEFLECTION YOKE (G)
⚠	1-451-455-31	DEFLECTION YOKE (R) (B)
⚠	1-452-790-21	NECK ASSY
	1-452-909-11	MAGNET ASSY, 4 POLE
	1-505-378-11	SPEAKER (10CM) (except KP-41T65)
	1-505-748-11	SPEAKER (10CM) (KP-41T65)
	1-556-945-21	CABLE, P-P
*	1-557-056-31	CABLE, P-P
⚠	1-769-837-11	CORD, POWER (WITH NOISE FILTER)
	8-598-414-00	ANTENNA SWITCH AS-2F
⚠	8-733-519-05	PICTURE TUBE 07MAC2 (B) (GROUND SPRING) (KP-41T65/46C65)
⚠	8-733-528-05	PICTURE TUBE 07MAC3 (B) (GROUND SPRING) (KP-48S65/53S65 (US (N65A- A), CND)
⚠	8-733-529-05	PICTURE TUBE 07MAC4 (B) (GROUND SPRING) (KP-61S65)
⚠	8-733-537-05	PICTURE TUBE 07MXC2 (G) (KP-41T65/46C65/48S65/53S65 (US (N65A-A), CND)/61S65)
⚠	8-733-539-05	PICTURE TUBE 07MXC2 (R) (KP-41T65/46C65)

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
⚠	8-733-553-05	PICTURE TUBE 07MXC3 (R) (KP-48S65/53S65 (US (N65A-A), CND))	
⚠	8-733-555-05	PICTURE TUBE 07MXC4 (R) (KP-61S65)	
		**********	
		ACCESSORIES AND PACKING MATERIALS	
		**********	
	3-862-541-11	MANUAL, INSTRUCTION (except KP-46C65 (US))	
	3-862-541-21	MANUAL, INSTRUCTION (KP-41T65 (CND) /46C65 (CND) /48S65 (CND) / 53S65 (CND) /61S65 (CND))	
	3-862-541-31	MANUAL, INSTRUCTION (KP-46C65 (US))	
*	4-037-674-01	BOARD, TOP (KP-46C65/48S65)	
*	4-041-423-01	SHEET, PROTECTION (KP-41T65/46C65/48S65)	
*	4-041-425-01	BAG, PROTECTION (KP-46C65/48S65)	
*	4-041-426-01	BAG, PROTECTION (KP-53S65)	
*	4-041-428-01	BAG, POLYETHYLENE (KP-61S65)	
*	4-042-463-01	SHEET, PROTECTION (KP-53S65/61S65)	
*	4-047-555-01	PLATE, TOP (KP-61S65)	
*	4-047-774-01	PLATE, TOP (KP-53S65)	
*	4-049-155-01	BAG, PROTECTION (KP-41T65)	
*	4-056-291-01	INDIVIDUAL CARTON (KP-53S65)	
*	4-056-292-01	CUSHION (UPPER) (ASSY) (KP-53S65)	
*	4-056-293-01	CUSHION (LOWER) (ASSY) (KP-53S65)	
*	4-056-298-01	BOARD, BOTTOM (KP-553S65)	
*	4-056-300-01	TRAY (KP-53S65)	
*	4-057-558-01	INDIVIDUAL CARTON (KP-41T65)	
*	4-057-559-01	TRAY (KP-41T65)	
*	4-057-560-01	CUSHION (UPPER) (ASSY) (KP-41T65)	
*	4-057-561-01	CUSHION (LOWER) (ASSY) (KP-41T65)	
*	4-057-642-01	CUSHION (UPPER) (ASSY) (KP-61S65)	
*	4-057-643-01	CUSHION (LOWER) (ASSY) (KP-61S65)	
*	4-057-648-01	INDIVIDUAL CARTON (KP-61S65)	
*	4-057-649-01	TRAY (KP-61S65)	
*	4-057-650-01	BOARD, BOTTOM (KP-61S65)	
*	4-057-651-02	CUSHION (UPPER) (ASSY) (KP-48S65)	
*	4-057-652-01	CUSHION (LOWER) (ASSY) (KP-48S65)	
*	4-057-657-01	INDIVIDUAL CARTON (KP-48S65)	
*	4-057-658-01	TRAY (KP-48S65)	
*	4-057-659-01	BOARD, BOTTOM (KP-48S65)	
*	4-057-989-01	INDIVIDUAL CARTON (KP-46CS65)	
*	4-057-990-01	TRAY (KP-46C65)	
*	4-057-991-01	BOARD, BOTTOM (KP-46C65)	
*	4-057-992-01	CUSHION (UPPER) (ASSY) (KP-46C65)	
*	4-057-993-01	CUSHION (LOWER) (ASSY) (KP-46C65)	
	4-060-038-01	TAPE, INSTRUCTION	
		REMOTE COMMANDER	
		**********	
	1-473-749-31	REMOTE COMMANDER (RM-Y136A)	
	4-978-977-01	POCKET, COVER (FOR RM-Y136A)	

9-965-206-01

Sony Ichinomiya Corporation
Quality Assurance Division

English
98CR74376-1
Printed in USA
©1998.3

SONY®

SERVICE MANUAL

RA-2A CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KP-41T65	RM-Y136A	US	SCC-N65D-A
KP-41T65	RM-Y136A	Canadian	SCC-N66B-A
KP-46C65	RM-Y136A	US	SCC-N65E-A
KP-46C65	RM-Y136A	Canadian	SCC-N66D-A
KP-48S65	RM-Y136A	US	SCC-N65B-A
KP-48S65	RM-Y136A	Canadian	SCC-N66A-A
KP-53S65	RM-Y136A	US	SCC-N65A-A
KP-53S65	RM-Y136A	US	SCC-N65A-B
KP-53S65	RM-Y136A	Canadian	SCC-N66C-A
KP-61S65	RM-Y136A	US	SCC-N65C-A
KP-61S65	RM-Y136A	Canadian	SCC-N66E-A

SUPPLEMENT -1

SUBJECT : CHANGE TO PICTURE TUBE OF KP-41T65

File this Supplement with the Service manual.

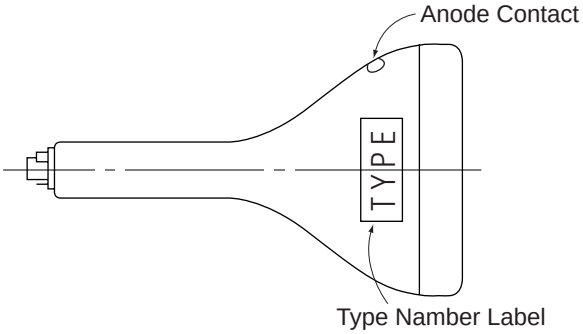
☛ : Indicate additional portion

[INTRODUCTION]

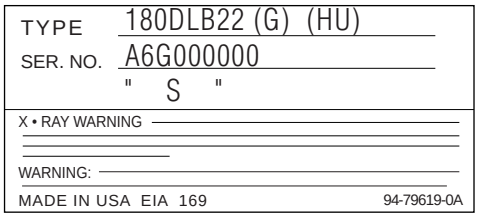
•This supplement is for models using HITACHI picture tube.

MODEL	DEST.	CHASSIS NO.
KP-41T65	US and Canadian	SCC-N93A-A

• Useing HITACHI picture tube identification



< Type number label >



MICROFILM

※ **Please file according to model size. .....**

41 | 46 | 48 | 53 | 61

[8. ELECTRICAL PARTS LIST]

PAGE	REF.	BEFORE CHANGE					AFTER CHANGE					REMARK
98		* A-1298-448-A	A BOARD ,COMPLETE **********				* A-1298-655-A	A BOARD ,COMPLETE **********				CHANGE
105		* A-1316-367-A	G BOARD ,COMPLETE **********				* A-1316-422-A	G BOARD ,COMPLETE **********				CHANGE
105	C514	1-162-133-00	CERAMIC	390PF	10%	2KV	1-161-754-00	CERAMIC	0.001MF	10%	2KV	CHANGE
105	C536	1-130-489-00	MYLAR	0.033MF	5%	50V	1-137-374-11	MYLAR	0.047MF	5%	50V	CHANGE
106	C869	1-130-487-00	MYLAR	0.022MF	5%	50V	1-130-489-00	MYLAR	0.033MF	5%	50V	CHANGE
108	R540	1-249-379-11	CARBON	0.68	5%	1/4W F	1-249-377-11	CARBON	0.47	5%	1/4W F	CHANGE
109	R556	1-260-117-11	CARBON	33K	5%	1/2W	1-260-123-11	CARBON	100K	5%	1/2W	CHANGE
109	R569	1-216-392-11	METAL OXIDE	1.8	%	3W F	1-216-390-11	METAL OXIDE	1.2	%	3W F	CHANGE
110	R921	1-249-429-11	CARBON	10K	5%	1/4W	1-249-431-11	CARBON	15K	5%	1/4W	CHANGE
	SG501						1-519-466-11	GAP,SPARK				ADD
	SG502						1-519-466-11	GAP,SPARK				ADD
111		* A-1331-777-A	CR BOARD ,COMPLETE **********				* A-1331-811-A	CR BOARD ,COMPLETE (VAR) **********				CHANGE
111	CN707						1-695-915-11	TAB(CONTACT)				ADD
111	R701	1-219-743-11	CARBON	100	5%	1/2W	1-219-745-11	CARBON	470	5%	1/2W	CHANGE
112		* A-1331-778-A	CG BOARD ,COMPLETE **********				* A-1331-812-A	CG BOARD ,COMPLETE (VAR) **********				CHANGE
112	CN738						1695-915-11	TAB(CONTACT)				ADD
112	R731	1-219-743-11	CARBON	100	5%	1/2W	1-219-745-11	CARBON 470 5% 1/2W				CHANGE
112		* A-1331-779-A	CBBOARD ,COMPLETE **********				* A-1331-813-A	CB BOARD ,COMPLETE(VAR) **********				CHANGE
112	CN767						1-695-915-11	TAB(CONTACT)				ADD
113	R761	1-219-743-11	CARBON	100	5%	1/2W	1-219-745-11	CARBON 470 5% 1/2W				CHANGE

[7. EXPLODED]

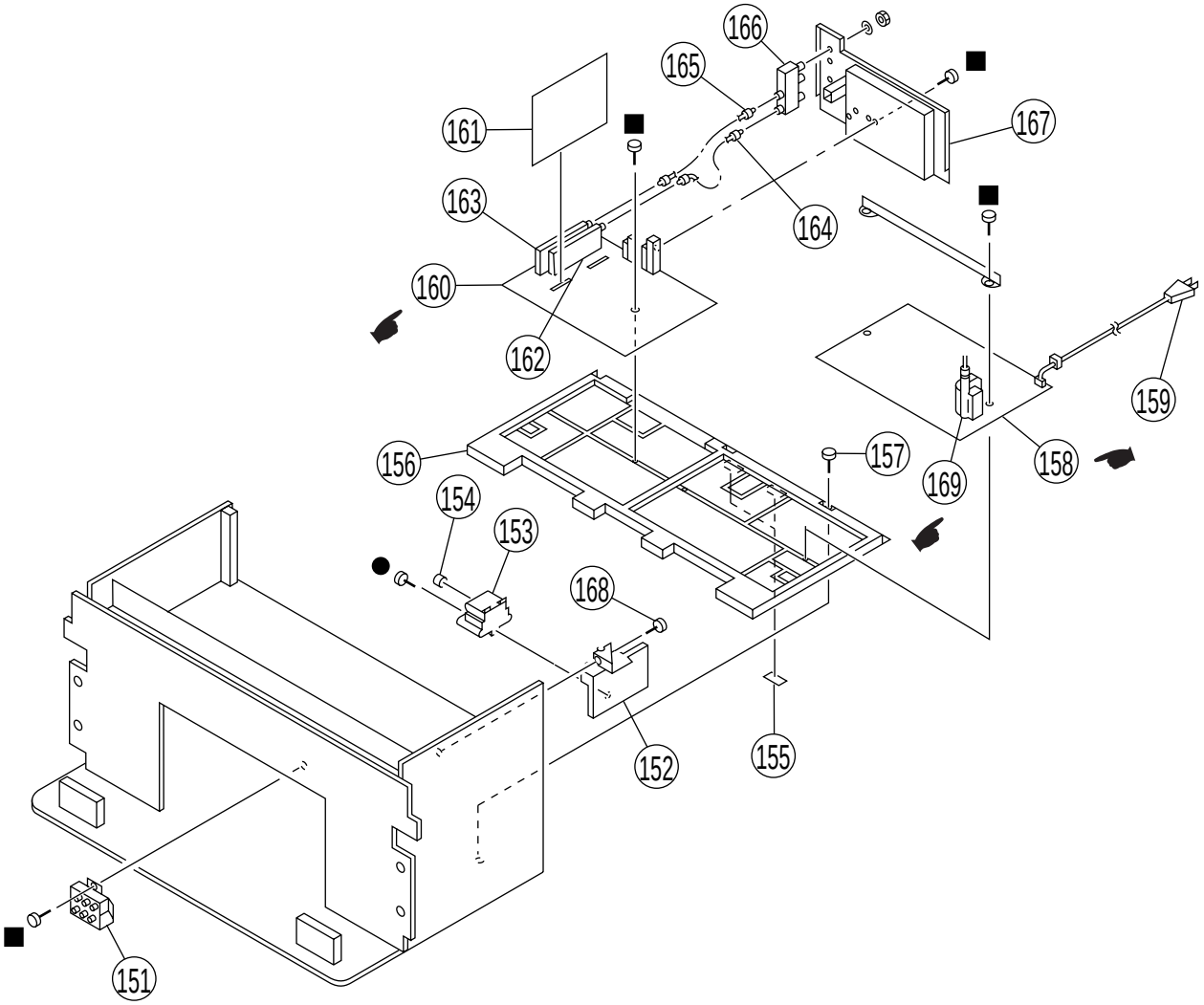
PAGE	REF.	BEFORE CHANGE		AFTER CHANGE		REMARK
92	169	⚠ 1-453-238-11	TRANSFORMER ASSY , FLYBACK (NX-4007//X4A4)	⚠ 1-453-248-11	TRANSFORMER ASSY , FLYBACK (NX-4007//X4T4)	CHANGE
94	252	4-048-142-01	SPRING ,TENSION	4-057-007-01	SPRING, TENSION	CHANGE
94	253	⚠ 8-733-539-05	PICTURE TUBE 07MXC2 (R)	⚠ A-1501-367-A	COUPLER (R) ASSY , PICTURE TUBE	CHANGE
94	254	⚠ 8-733-537-05	PICTURE TUBE 07MXC2 (G)	⚠ A-1501-369-A	COUPLER (G) ASSY , PICTURE TUBE	CHANGE
94	255	⚠ 8-733-519-05	PICTURE TUBE 07MAC2 (B) (GROUND SPRING)	⚠ A-1501-372-A	COUPLER (G) ASSY, PICTURE TUBE	CHANGE

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

7-4. CHASSIS (KP-41T65)

● : +BVTP 4X12 7-685-661-14
■ : +BVTP 3X12 7-685-648-79



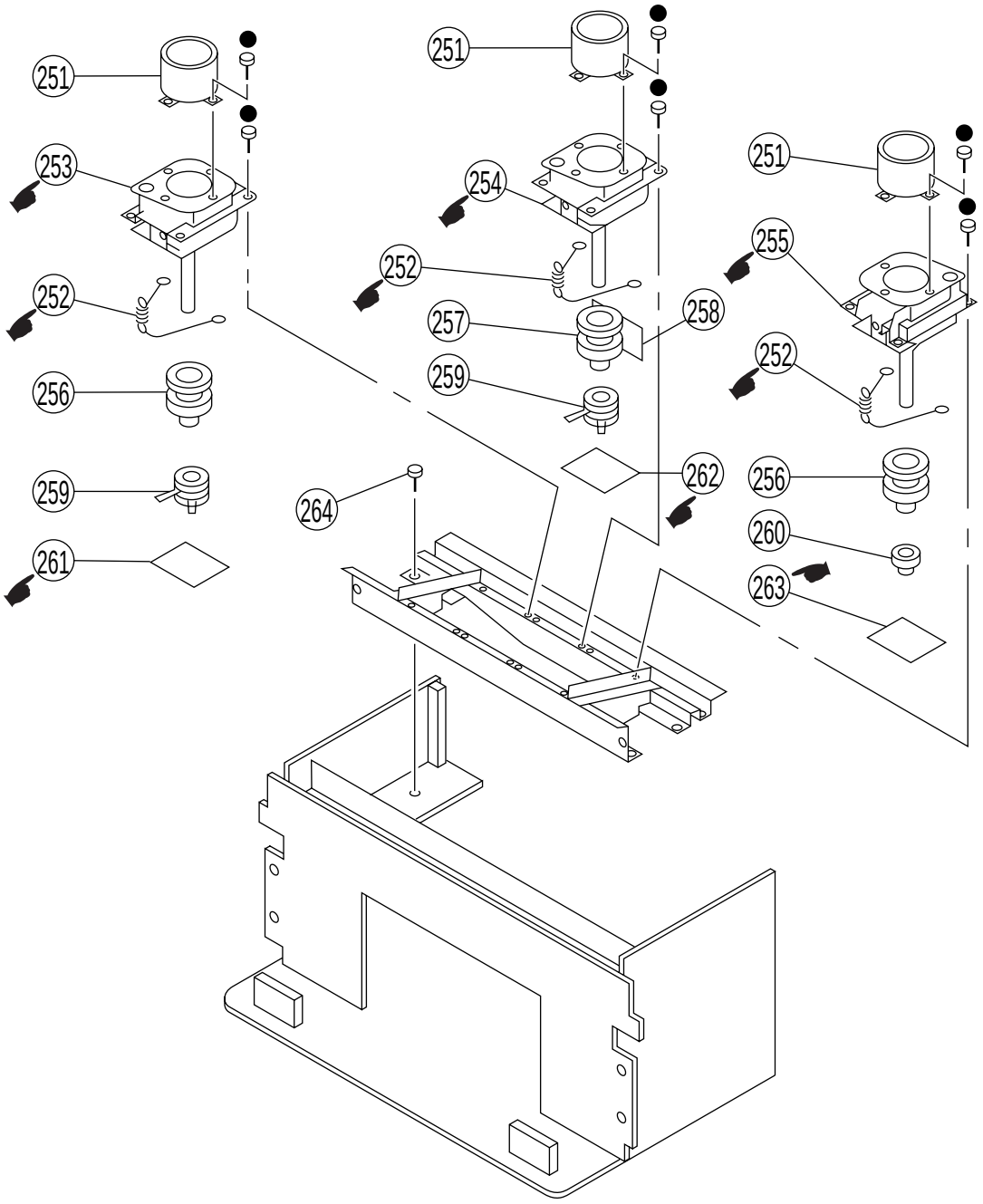
REF. NO.		PART NO.	DESCRIPTION	REMARK
151	⚠	1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
152	*	4-057-596-01	BRACKET, HV	
153	⚠	8-598-955-30	BLOCK ASSY, HIGH-VOLTAGE	
154		4-373-137-01	CAP (Z), RUBBER	
155		3-551-305-21	CUSHION, PANEL	
156	*	4-057-594-01	BRACKET, MAIN	
157		4-052-894-01	SCREW (4X20), HEAD TAPPING	
158	*	A-1316-422-A	G BOARD, COMPLETE	
159	⚠	1-769-837-11	CORD, POWER (WITH NOISE FILTER)	
160	*	A-1298-655-A	A BOARD, COMPLETE	
161	*	A-1190-265-A	PT BOARD, COMPLETE	
162	⚠	8-598-339-00	TUNER BTF-LA402	
163	⚠	8-598-340-00	TUNER BTF-WA404	
164	*	1-557-056-31	CABLE, P-P	
165		1-556-945-21	CABLE, P-P	
166		8-598-414-00	ANTENNA SWITCH AS-2F	
167		4-057-595-21	TERMINAL BOARD	
168		4-378-522-31	SCREW (4X20), TAPPING	
169	⚠	1-453-248-11	TRANSFORMER ASSY, FLYBACK (NX-4007//X4T4)	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

7-6. PICTURE TUBE (KP-41T65)

● : +BVTP 4X12 7-685-661-14



REF. NO.		PART NO.	DESCRIPTION	REMARK
251		4-056-258-01	LENS (DELTA 78)	
252		4-057-007-01	SPRING, TENSION	
253	⚠	A-1501-367-A	COUPLER (R) ASSYPICTURE TUBE	
254	⚠	A-1501-369-A	COUPLER (G) ASSYPICTURE TUBE	
255	⚠	A-1501-372-A	COUPLER (B) ASSYPICTURE TUBE	
256	⚠	1-451-455-31	DEFLECTION YOKE (R) (B)	
257	⚠	1-451-455-11	DEFLECTION YOKE (G)	
258	*	A-1390-867-A	Z BOARD, COMPLETE	
259	⚠	1-452-790-21	NECK ASSY	
260		1-452-909-31	MAGNET ASSY, 4 POLE	
261	*	A-1331-811-A	CR BOARD, COMPLETE (VAR)	
262	*	A-1331-812-A	CG BOARD, COMPLETE (VAR)	
263	*	A-1331-813-A	CB BOARD, COMPLETE (VAR)	
264		4-052-894-01	SCREW (4X20), HEAD TAPPING	

9-965-206-81

Sony Ichinomiya Corporation
Quality Assurance Division

English
98HN02377-1
Printed in JAPAN
© 1998.8